

Quality Assurance Regulation and Procedures at the Doctoral School of Mathematics and Computer Science, Budapest University of Technology and Economics

2025

This is an English language translation of the regulations of the Doctoral School of Mathematics and Computer Science at BME. In case of any doubt or controversy, the regulations of the original document will prevail.

General principles and procedures pertaining to the quality assurance of doctoral programmes and awarding PhD degrees are regulated by the Doctoral and Habilitation Procedures of BME (BME DHSZ), the Code of Studies and Exams 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 complies with the recommendations of the Hungarian Doctoral Council (ODT).

1. Announcement of doctoral thesis topics

- (1) Once every year (in October–November), the Doctoral School requests proposals for PhD topics from the organizational units participating in the training, as well as from the cooperating institutions. The affiliation data of supervisors of the topics must also be provided for each topic proposal. The Doctoral School Council (DIT) evaluates all topics, and accepts only those for which the intellectual and infrastructural background of the research is ensured, and for which it seems realistic that a high-quality dissertation can be submitted within 4-5 years. If the topic supervisor reaches the age limit for retirement within 4 years from the start of the doctoral studies, the announcement of the topic is subject to the appointment of a reserve supervisor.
- (2) Active research activity is a high priority for the supervisors: the indicators of the scientific publications of the 5 years prior to the publication of the topic must significantly exceed the Doctoral School's publication requirements for obtaining a degree (see later). By evaluating previous supervision experiences, it is necessary to avoid that students enroll under the supervision of lecturers who consistently provide ineffective topic guidance.
- (3) The doctoral topics to be announced and approved by DIT and the data sheets of the supervisors can be viewed on www.doktori.hu and on the website of the Doctoral School. Regularly updated public information about the admission requirements and the list of those admitted to the doctoral school can also be found on the website of the Doctoral School.

- (4) The provider of a thesis topic becomes a supervisor when a PhD student is accepted and enrolls to the Doctoral School for the announced topic. Each doctoral student is assigned one and only one supervisor, who manages and supports the studies and research work of the doctoral student working on the topic with full responsibility, as well as the doctoral candidate's preparation for obtaining a degree. Dual topic guidance is only possible (with the approval of the University Habilitation Committee and Doctoral Council) in the case of training conducted within the framework of international cooperation or in the case of an interdisciplinary research topic. A supervisor may only have more than 4 PhD students in specially justified cases. These conditions may only be waived by the DIT with the consent of the EHB DT.

2. Admission to doctoral training

- (1) Admission to the doctoral program can only be done by applying for a nationwide application on www.doktori.hu, and after a successful hearing by the Admission committee. The Doctoral School issues a call for applications twice a year (around March and November), which includes topic descriptions and the form and content requirements for admission to the doctoral program.
- (2) Participating in the entrance exam is subject to written confirmation of acceptance by the supervisor and the receiving unit (department or external institution). The formal requirement for admission is a diploma with at least a good rating. An additional requirement for admission is a sufficient knowledge of English to be able to study the literature and, to communicate fluently with the supervisor and the staff of the Doctoral School. This will be verified by the admission committee during the admission procedure. This check is not required if the candidate has a state-recognised complex language examination in English at level B2 or equivalent.
- (3) The purpose of the admission hearing (June and January) is to check the appropriate preparation of the applicants, and to make a ranked admission proposal. The admission hearing takes with the Admission Committee appointed by the DIT. The professional habitus points given in the admission hearing are partly based on the knowledge of the chosen topic. The Admissions Committee will assess the candidate's preparedness for the interview, previous academic achievements, language skills and previous professional and academic activity, with a score between 0 and 100. The scoring guide is available on the doctoral school's website in the regulations. A minimum of 60 points is required for admission. To be admitted to the entrance examination, the applicant must obtain at least 15 out of the maximum 30 points available in the written test.
- (4) The admission process is controlled by several parties involved: based on the report of the Admissions Committee, the DIT makes a proposal to the Dean of the Faculty for admission and the awarding of the state scholarships. Admission decisions are made by the Dean of the Faculty., based on the DIT's proposal (Section 13, (6), (7) of the DHSZ)

3. Doctoral training

(1) The DIT decides on the acceptance of the courses offered in the doctoral training. The training plan of the Doctoral Program must be reviewed at least every three years.

(2) The instructors of the Doctoral School can only be those instructors and researchers with a scientific degree whom the DIT considers suitable and invites to hold doctoral courses for a given period. The professors of the Doctoral School appear in the School's ODT database, and if someone teaches at several doctoral schools, he declares on the ODT data sheet the percentage of which Doctoral School he belongs to.

(3) The publication requirements of the PhD degree include the expectations related to the research work and the expected level of independence. Each doctoral student must give at least one professional presentation about his/her research results per year, preferably in a forum in a foreign language. The Doctoral School may propose, that, the student attends the most important European conferences related to his/her topic.

(4) Regularly updated public information on the Doctoral School's training plan, subjects and instructors, as well as research directions can be found on the doctoral school's website.

4. Monitoring

- (1) The DIT evaluates the students' academic performance and progress each academic year on the basis of the doctoral student's work reports (Section 177 Point 1 and 8 of BME TVSZ). The work report to be submitted per semester, according to the form that can be downloaded from the website of the Doctoral School, contains the aggregated indicators of study and research results (including PhD publications, conference and seminar presentations).
- (2) The DIT also separately monitors the elements of the students' academic achievements that will be necessary for the initiation of the graduation procedure, and give feedback to the students.
- (3) Based on the evaluation of the DIT, the Dean of the Faculty may reclassify state-supported students who are not making adequate progress in their studies or research into self-funded education (Section 13, point 8 of BME TVSZ).
- (4) The Doctoral School monitors the life path of the students who obtained the degree using the uniform monitoring procedure applied at BME. The results of this are published in the Doctoral School's periodic self-evaluations in the www.doktori.hu database. The self-evaluation also contains other statistical data on the training (student number data, average time to obtain a degree, degree attainment rate, etc.).

5. PhD publication requirements

- (1) The general requirements of the doctoral degree are regulated in detail by the BME DHSZ.
- (2) Publications of the students results must be assigned to the thesis points, and a declaration of co-authorship disclaimer must be requested in the form specified by the Doctoral School.

- (3) The condition for obtaining the degree is that the publications assigned to the thesis points meet the detailed publication requirements of the Doctoral School. This is reviewed annually by the doctoral school and amended as necessary. The currently valid expectations are included in the appendix.
- (4) If there is a change in the graduation requirements, the former or the new requirements must be applied within 2 years of the decision of the change, according to the candidate's choice.
- (5) The system of requirements (according to MAB regulations) is part of the Doctoral School's Operational Regulations, so it is available in the www.doktori.hu database, but it can also be accessed directly via the website of the Doctoral School or the University.

6. Graduation procedure, acquisition of degree

- (1) The rules of the graduation procedure are described in detail in Section 15 - 23 of the BME DHSZ. The body conducting the procedure is the Mathematics and Computer Sciences Habilitation Committee and Doctoral Council (HBDT), whose members are highly qualified specialists in the discipline.
- (2) The doctoral thesis must be submitted for discussion at the workplace before submission ("house defense"). In the debate, the thesis is evaluated by an internal and an external opponent with at least a PhD degree. The course of the discussion and especially the opinions and findings related to the amendment of the thesis must be recorded in minutes. The opponent's opinion is attached to the minutes. In the case of a significant revision of the dissertation, the house defense must be conducted again.
- (3) After submitting the dissertation, the members of the Public Defense Committee will receive the dissertation and the thesis booklet in both printed and electronic form. The identity of the opponents will not be made public until the evaluations have been completed. The members of the Public Defense Committee will receive the opponent's reviews, and the candidate's answers to them in electronic form no later than one week before the defense. When the public debate is announced, the dissertation and the thesis booklet become public on the www.doktori.hu page.
- (4) Dissertations sent to reviewers cannot be modified afterwards. If the Public Defense Committee objects to incorrect statements or does not accept certain thesis points, then the committee must fill out the relevant part of the minutes, it is then attached to the dissertation (also in electronic form), and the defended dissertation is made public with this addition (library, repository).

7. Concluding remarks

The regulations aim to achieve the following quality assurance principles:

Professional control: The control of public scientific opinion must be enforced throughout the entire process of doctoral training and degree acquisition.

Publicity: The main phases of the quality assurance system should be widely public to the professional and scientific public. Documentation should be prepared on all decision points related to doctoral training and obtaining a degree. The operation of the quality management system should impose only a minimal administrative burden on the instructors and researchers participating in the training and degree acquisition procedures.

Feedback: The lecturers, supervisors and members of the various bodies of the Doctoral School participating in doctoral training should receive continuous feedback on the quality of their activities and have the opportunity to provide feedback on their experiences.

Individual responsibility: It should be clearly defined who is responsible for what among those participating in doctoral training.

The principle of protection of intellectual property: The development of the quality management system should also contribute to ensuring that doctoral training will continue to be fully in line with the European Union's and Hungary's efforts to protect intellectual property.

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