

# **BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS**

## **Doctoral School of Informatics**

### **Quality Assurance Plan**

The principles and methods of quality assurance in doctoral training and degree acquisition are primarily set in BME Doctoral and Habilitation Regulations (BME DHSZ), Study and Examination Regulations (BME Doctoral TVSZ) and the Operational Regulation of the Doctoral School. The following description partly overlaps with these requirements and partly goes beyond them, but does not cover what appears in the related legislation mandatory quality assurance elements.

The Doctoral School of Informatics (hereinafter: Doctoral School) Quality Assurance Regulations intends to achieve high-standard of the Doctoral School as a whole based on six priority phases of doctoral training and degree acquisition. These priority phases:

- announcement of doctoral topics,
- admission to the doctoral program training,
- doctoral training subjects,
- student progress monitoring,
- PhD degree requirements,
- PhD degree procedure.

#### **The mission of the doctoral school**

The main goal of the Doctoral School is scientific elite training: the supply of teachers and researchers in the research areas of the school. Our goal is to train professionals who are suitable for independent research publication and who know the contexts of the discipline of physics. They should be able to carry out high-quality research in their field and publish their results at the international level as well as to manage research projects, transfer up-to-date knowledge, to achieve and apply innovative results.

Quality	Indicator	Objective
high scientific standard	thesis points of the PhD dissertation linked to publications	scientific publications in high impact journals
international embeddedness	number of dissertations in English language	the dissertations are mostly in English
widely used knowledge	location statistics	preparation for three careers: research institute, higher education, private sector
industrial use and knowledge transfer	the number of participation, number of patents in industrial research projects	increasing the number of newly created technologies, procedures and patents
efficiency	graduation rate	significantly exceeds domestic average

Quality assurance applies to all elements of doctoral training and degree acquisition:

(1) announcement of topics, (2) admission to doctoral training, (3) curriculum and research part, (4) monitoring during training, (5) doctoral degree procedure, and (6) tracking of students with PhD degree. Supervision of quality-determining activities is the responsibility of the doctoral school council (DIT) based on the procedures and quality assurance elements detailed below.

#### **Announcement of doctoral topics**

(1) The Doctoral School requests PhD topic proposals from the organizational units participating in the training as well as from the cooperating institutions twice a year (October and March). The topic proposals need to include the details of the supervisor. It is a general requirement that they must have

at least a 2-year professional experience from the date of obtaining their doctoral degree as well as the supervision of a maximum of 3 doctoral students at a time. In addition, it is the Doctoral School Council (DIT) that approves of the announced research topics and the supervisors (see Doctoral School Operational Regulations). The members of the council meet outstandingly high professional and scientific expectations.

. In case of an external supervisor, an approval letter is needed which shall be signed by the head of the Doctoral School as well as the appointment of a consultant working at BME.

(2) A key expectation for supervisors is active research activity: the indicators of the scientific publications should exceed the required publication requirements set by the Doctoral School 5 years prior the announcement.

(3) The announced doctoral topics approved by the DIT and the data sheets of supervisors shall be available on <http://www.doktori.hu> and on the website of the Doctoral School.

Announced doctoral topics and supervisors as well as the requirements and regularly updated public information on the list of those admitted to the Doctoral School are also available on the website of the Doctoral School.

(4) A topic announcer can only become a supervisor if an applying student is admitted and enrolled for the announced topic in the doctoral school. Each doctoral student shall have a supervisor who shall supervise and assists the doctoral student working on the topic in his studies, research work, and the preparation for obtaining the doctoral degree. Dual supervision is only possible in case of interdisciplinary research of an international cooperation or in case of an interdisciplinary research topic. A supervisor may only have more than 4 doctoral students in only justified cases with the prior consent of EHBDDT.

(5) The name of the supervisor (s) must be clearly indicated on the title page of the doctoral dissertation. This should match the name of the supervisor (s) approved by DIT on the thesis booklet and uploaded to the database of the National Doctoral Council (on the website [www.doktori.hu](http://www.doktori.hu)) data.

(6) If a PhD student, starting before 1 September 2016, initiates the doctoral procedure after more than 7 years, the name of the supervisor can only be included in the dissertation in specifically justified cases. In the absence of such EHBDT consent, the student is considered an individual preparer.

(7) If a PhD student, starting after 1 September 2016, misses to submit his/her dissertation within three years after the complex examination (the three - year deadline may be extended for a maximum of one year with the approval of DIT), then he/she may only obtain the PhD degree by repeating his/her studies or by preparing as an individual student without indicating the name of the supervisor. (Section 14 (4) of the BME DHSZ).

### **Admission to doctoral training**

(1) Admission for doctoral training may only take place with the application for the nationally announced application procedure on [www.doktori.hu](http://www.doktori.hu) and after a successful selection board hearing.

The doctoral school issues a call for applications every six months (March, November), which contains topic announcements, as well as the form and content of admission to doctoral training.

(2) The prerequisite for taking part in the entrance exam is an acceptance letter provided by the supervisor and the host unit (department or external institution). The formal requirements of admission are at least a good qualification of results as well as a certificate of English language skills.

(3) The purpose of the admission hearing (June) is to ensure students' preparedness. Admission takes place before the Admissions Committee appointed by the DIT. The prerequisite for taking part in the entrance exam is an acceptance letter provided by the supervisor and the host unit (department or external institution).

(4) The admission process is controlled by a number of persons and bodies of the Doctoral School and the Faculty: based on the report of the Admissions Committee, DIT proposes to the Dean of the

Faculty on admission and the award of public scholarships. Admission decisions are made by the Dean of the Faculty

### **Doctoral training subjects**

(1) DIT shall be responsible for the acceptance of subjects for the training and for its update before the semester. The syllabus shall be reviewed at least every three years.

(2) The teaching competency of the Doctoral School is constantly monitored by the DIT: Only lecturers and researchers with a scientific degree may be appointed as doctoral lecturers - on the proposal of the head of the doctoral school – whom DIT considers suitable for a given time period for teaching, research and supervising tasks within the school.

(3) The publication requirements for the doctoral announcement and the doctoral degree procedure include the expectations related to research work and the expected level of independence. All doctoral student gives at least one professional lecture per year on his / her research results, preferably on a foreign language forum. The doctoral school ensures that the student has the opportunity to travel to a foreign university / institute during the training where there is ongoing research related to his/her topic.

(4) The training plan of the Doctoral School, as well as its subjects and lecturers shall all be available on the website of the Doctoral School.

### **Monitoring student progress**

(1) The academic performance and progress of students shall be assessed by DIT from 2009 onwards per academic year on the basis of the doctoral student's work reports (Section 4 (1) of the BME Doctoral TVSZ).

The work report, that is to be submitted each semester, is based on a form that can be downloaded from the website of the Doctoral School. The report contains the aggregated indicators of study and research results (including publications on PhD, conference and seminar lectures).

(2) DIT shall pay special attention to the students' academic performance which will be needed to start the doctoral degree procedure.

(3) Particular emphasis shall be placed on the second - year complex review exam, where students should have an oral discussion in the presence of the supervisors in front of a professional group similar to the Admissions Committee.

(4) During the regular internal doctoral student workshops of VIK teachers

student progress is also monitored.

### **PhD degree requirements**

- (1) The general requirements for the doctoral degree are regulated by BME Doctoral Regulations.
- (2) In order to obtain the degree - according to Section 15 (6) of the BME DHSZ - a detailed system of doctoral requirements must also be met set by the Habilitation and the Doctoral Council (HBDT). The requirements are published on the website of the Doctoral School.
- (3) The system of degree requirements developed by HBDT - Section 7 (7) of the BME DHSZ g) – is also approved by the EHBDT. In order to have the approval of EHBDT for the priority of publication requirements, general (BME level) minimum requirements are also set that are published on its website.

### **Doctoral degree procedure**

- (1) The rules of the degree acquisition procedure are described in detail in Sections 15 - 23 of the BME DHSZ. The body conducting the procedure is the Habilitation Committee and the Doctoral Council of Informatics (HBDT), composed of highly qualified experts in the field: two-thirds of the members are university professors, and those who do not have the title of a university professor are Doctors of Sciences.
- (2) The requirement for a doctoral degree is the acquisition of the leaving certificate, the submission of the doctoral dissertation within three years after complex review exam and the the successful in a public debate organized by the HBDT (the three - year deadline may be extended in extraordinary cases with the competence of DIT).
- (3) Before the submission of the doctoral dissertation, an internal defense must be held which aims to improve the dissertation and thesis points and to prepare for public debate. Minutes shall be written about the internal defense in which the research community recognizes the results included in the candidate's thesis points as independently achieved results.
- (4) Results containing scientific references should be assigned to the thesis points in the doctoral dissertation and a co-author resignation statement should be attached in a form that is determined by the doctoral school.
- (5) The condition for sending the doctoral dissertation to reviewers is that it contains its own results scientific publications that comply with detailed publication requirements of the doctoral school, which is part of the Operational Regulations of the doctoral school (publicly available in the

ww.doktori.hu database and also on the doctoral school's website). The additional condition for initiating a review procedure is the fulfillment of language requirements.

(6) The dissertation sent to the reviewers cannot be modified afterwards. In case the Review Committee finds professionally erroneous statements or does not accept thesis points, the minutes, including such objections, shall be attached to the dissertation (also in electronic form), and the defended dissertation will be published with this addition (library, repository).

(7) If there is any change in the degree requirements, the candidate shall select the former or the new requirements within two years of the decision.

### **Quality assurance principles**

With some points of the Doctoral School's quality assurance regulations, the following points intend to achieve the priority enforcement of quality assurance principles:

(1) Principle of professional control. Throughout the entire process of doctoral training and doctoral degree procedure, the control of the international and domestic professional-scientific public opinion must be enforced.

(2) Principle of scientific ethical requirements. During the establishment and operation of the quality management system, the resolutions of the Scientific Ethics Committee of the Hungarian Academy of Sciences must be validated.

(3) Principle of publicity. The main phases of the quality assurance system shall be widely publicized for professional and scientific opinion.

(4) The principle of feedback. Teachers, supervisors and doctoral students in doctoral training and members of the school's various councils shall receive ongoing feedback on their activities and have the opportunity to feed back their own experience as well.

(5) The principle of quality-centricity. By establishing a quality management system, we wish to achieve the level of standard to grow steadily of both our students and teachers. At the same time humbleness should become a part of their values while being initiative and creative.

(6) Principle of protection of intellectual property. The development of quality management system should contribute to the completion of university doctoral training as well as to the European Union and the Republic of Hungary for the protection of intellectual property efforts.

(7) The principle of individual responsibility. Establishment and operation of a scientific school is teamwork, but it can only be successful if it is clearly defined to all members what their responsibilities are in the training and research process.

(8) Principle of process documentation. All decisions of doctoral training should have documentation. Documentation control is the principle of quality management. However, it is an important objective not to increase the administrative burden on teachers involved in training during the establishment and operation of quality management.

### **Final provision**

Where these regulations are not laid down in the legislation and in BME regulations, or imposes a stricter requirement, requirements at higher levels shall be applied to the extent permitted by law. In case of doctoral training the authorization (submitted in writing, on the basis of a detailed reasoned request) shall be granted by DIT, in case of doctoral degree procedure, the authorization shall be given by HBDT in a recorded decision.