

# **BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS**

## **Doctoral School of Electrical Engineering 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 (Act CCIV of 2011 on National Higher Education, a 387/2012 on doctoral schools, the order of doctoral procedures and habilitation. (XII.19.) Government Decree and the decisions of the MAB on doctoral training).

The Doctoral School of Electrical Engineering (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.

### **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 topic announcer. 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 topic announcers (see Doctoral School Operational Regulations). 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. External supervision (including supervision at the external research site) is only possible in institutions with a cooperation agreement with the Doctoral School, where the intellectual and infrastructural background of the research is provided on the basis of a contract, as well as the student's employment status.

(2) A key expectation for topic announcers 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) Doctoral topics approved by the DIT are to be announced shall be available on <http://www.doktori.hu> and on the website of the Doctoral School. Admission 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. A topic announcer can only become a supervisor if an applying student is admitted and enrolled for the announced topic in the doctoral school.

(4) Each doctoral student shall have a supervisor who shall supervise and assist 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 adopted by DIT and with the prior consent of EHBTD.

### **Admission to doctoral training**

(1) The doctoral school issues the call for application twice a year (March and October), which includes the announced research topics, as well as the formal and substantive requirements of admission to doctoral training. The purpose of the admission hearing (June) is to check the preparedness of applicants and to make a ranked admission proposal. The admission takes place before the Admission Committee designated 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).

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

(3) Based on the evaluation of DIT, the Dean of the Faculty may enlist students progressing inadequately in their studies to fee-paying training. (BME TVSZ § 27 9).

(4) PhD students who have earned their degree are monitored by the Doctoral School by its integrated procedure. The results of the outcome shall be made public in the periodic self-assessments on the database on <http://www.doktori.hu>.

### **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.

(4) In addition to the continuous monitoring of the quality of the examinations, HBDT shall review the subjects every three years. Examination Committees are appointed by the HBDT.

### **Doctoral degree procedure**

(1) The rules of the degree acquisition procedure are described in detail in Sections 15 - 23 of the BME DHSZ.

(2) The doctoral dissertation must be submitted to an internal defense before submission. In the debate, the dissertation shall be evaluated by an external opponent with at least a doctoral degree. The debate and, in particular, the opinions on the modification of the dissertation, findings shall be recorded in the minutes. The opponents' opinion shall be attached to the minutes. In case of major revision of the dissertation, the internal defense should be resumed.

(3) After the submission of the dissertation, the members of the Review Committee, appointed by HBDT, shall receive the complete procedural material in printed and electronic form. The identity of the opponents is not public until the reviews are completed. The members of the Review Committee shall receive the reviews of the opponents after the delivery of the reviews electronically and the

candidate's answers within a week before the defense. When announcing the public defense, the dissertation and the thesis booklet become public on the doctoral school website.

### **Concluding remarks**

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.

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