

**QUALITY ASSURANCE PLAN
OF THE DOCTORAL SCHOOL OF BIOLOGY
University of Szeged**

1. Identification Data of the Doctoral School

Institution: **University of Szeged, Faculty of Science and Informatics**

Field of Science Classification: **Biological Sciences**

Name of the Doctoral School: **Doctoral School of Biology (BDI)**

Identifier of the Doctoral School: **116**

Year of Accreditation: **2000 (based on predecessors established in 1995)**

Head of the Doctoral School: **Csaba Vágvölgyi, Doctor of the Hungarian Academy of Sciences, Full Professor**

Training Programs of the Doctoral School of Biology (BDI)

- BDI/"Biochemistry and Molecular Biology" Training Program
- BDI/"Genetics" Training Program
- BDI/"Microbiology" Training Program
- BDI/"Biotechnology" Training Program
- BDI/"Plant Biology" Training Program
- BDI/"Neurobiology" Training Program
- BDI/"Human Biology" Training Program
- BDI/"Ecology and Evolution" Training Program

2. Operation of the Doctoral School of Biology (BDI)

The operation of the Doctoral School of Biology (BDI) is guided by the Doctoral Regulations of the University of Szeged (EDSz) and the Regulations of the Doctoral School of Biology concerning doctoral training, under the management of the Doctoral School Council of Biology (BDIT). The BDIT ensures the high standard of doctoral training and degree acquisition and ensures that students have access to the intellectual and material resources of the collaborating institutions in the training.

3. Quality Assurance Plan

The Doctoral School ensures the high standard of doctoral training and degree acquisition at all stages (admission, doctoral studies, degree acquisition) by following the criteria defined in the Quality Assurance Plan. It adheres to the document titled "Quality Assurance Guidelines for Doctoral Training and Degree Acquisition at the University of Szeged."

The admission and academic requirements of the Doctoral School are regulated by the Doctoral Regulations of the University of Szeged, the Regulations of Scientific Fields for Doctoral Programs, and the Regulations of the Doctoral School of Biology concerning doctoral training. Every four years, before accreditation, the Doctoral School reviews its regulations, and any amendments are approved by the BDIT and submitted to the Scientific Field Doctoral Council and the University Doctoral Council (EDT).

The BDIT annually evaluates the operation of the Doctoral School according to quality assurance criteria. Annual quality assurance reports of the Doctoral Schools include experiences from the admission process, Complex exams, and completed defenses. The quality assurance officer is the Secretary of the BDI.

The Doctoral School keeps the quality assurance report in electronic form.

Proposals for core members of the Doctoral School are made by the Head of the Doctoral School of Biology and approved by the BDIT. The Scientific Field Doctoral Council (TDT) reviews and the University Doctoral Council (EDT) votes and makes the final decision.

Recommendations for supervisors are made by the Head of the Doctoral School of Biology based on materials received from applicants for supervisory positions, which are then voted on by the BDIT.

Every four years, before the current MAB accreditation, the composition of core members and teaching staff is reviewed by the Doctoral School.

The documents of the BDI are available on the website of the Doctoral School (www.bdi.u-szeged.hu) and on the official website of the National Doctoral Council (ODT).

3.1. Announcement of Doctoral Topics

PhD topics are announced annually in March (by March 31). The announced topics are valid for one year.

The BDIT evaluates all topics and only approves those for publication on the ODT platform if the scientific and infrastructural background for the research is ensured and it is deemed realistic that a high-quality dissertation can be submitted within three years after the Complex exam.

Supervision at an external research site is possible only in institutions that have a cooperation agreement with the BDI.

A key requirement for topic proposers is active research activity: it is desirable that the metrics of scientific publications from the five years preceding the topic announcement significantly exceed the publication requirements for obtaining a doctoral degree at the doctoral school. The BDIT evaluates the past supervision records of topic proposers to ensure that students are under the guidance of successful supervisors.

A topic proposer becomes a supervisor when a student who applies for their announced topic is admitted and enrolls in the doctoral school. Each doctoral student has one (or in specific cases defined by the regulations, two) supervisors who bear full responsibility for guiding and assisting the student's studies, research work, and preparation for degree acquisition. A supervisor may only oversee more than three doctoral students for justified reasons.

3.2. Admission to Doctoral Training

The BDI requires professional knowledge that presupposes an excellent understanding of university-level material. It demands and assesses professional commitment during the admission exam, a master's degree (or an equivalent university diploma), and a forward-thinking, well-considered research program. The admission interview can be conducted in person or, if justified, online.

The admission committee consists of the head of the doctoral school, two members of the BDIT (core members), and the secretary of the doctoral school.

Admission to the doctoral training is only possible for topics announced nationwide on the ODT platform (www.doktori.hu) following a successful hearing by the admission committee. The points for professional aptitude assess, in part, familiarity with the chosen topic. To be admitted successfully, applicants must achieve at least 50% of the maximum score. The BDI publishes the date and requirements for the admission exam on its website (www.bdi.u-szeged.hu). A detailed description of the scoring is provided in the Operational Regulations.

Participation in the admission exam requires the complete submission of required documents by the specified deadline, including written confirmation of acceptance by the supervisor and the host unit (department or external institution).

A formal requirement for admission is a master's degree and proof of proficiency in the professional language(s) necessary for the field as prescribed by the BDIT.

3.3. Training

Admitted students participate in eight semesters of training. The first four semesters constitute the Training and Research Phase, followed by the Research and Dissertation Phase after passing the Complex Exam. The prerequisite for obtaining the final certificate is completing at least 240 credits according to the training plan.

Students must achieve research results with international significance. The publication requirement, demonstrating compliance with expectations, can be proven with at least two publications in journals with impact factors, one of which must list the candidate as the first author. A patent application resulting from the candidate's work may be accepted instead of a co-authored publication, with BDIT approval. Students upload their publications to the MTMT database (www.mtmt.hu).

Students are also expected to actively participate in the professional life of their hosting laboratory, department, or institution. They should regularly present progress reports and/or literary seminars and participate in such events. Written reports of their work should be regularly prepared for the supervisor and annually for the BDIT, in accordance with EDSz requirements. If possible, students should participate in and present at professional forums and conferences.

The BDIT decides on the acceptance of courses for training and the renewal of course content. The curriculum should be reviewed at least every four years.

Only those instructors and researchers with scientific degrees deemed suitable by the BDIT can teach in the doctoral school for a defined period. The doctoral school's instructors are listed in the ODT database, and if someone belongs to multiple doctoral schools, they must declare the percentage of affiliation on their ODT profile.

Information on the current training plan, courses, and instructors of the doctoral school is regularly updated and available on the doctoral school's and ODT's websites.

The Complex Exam

The Complex exam must be taken before a committee in accordance with university doctoral regulations. The committee consists of leading experts in the field, with at least one-third of its members from external institutions. The exam is available to students who have earned at least 90 credits during the first phase of training. In the first part of the exam, students present their scientific achievements, outline their research plan for the Research and Dissertation Phase, and discuss their publications. The presentation is authenticated by a statement from the supervisor. The second part involves a theoretical exam on two specified topics. The BDI's operational regulations and EDSz describe the Complex exam in detail.

4. Degree Acquisition Process

The details of the degree acquisition process, including publication and language requirements, are described in the BDI's Operational Regulations.

The Doctoral Dissertation

The formal requirements of the doctoral dissertation are set by the university and faculty doctoral regulations. Before submission, the dissertation must undergo an internal debate. For those in structured training, the BDI mandates a preliminary workplace debate. The dissertation can only be submitted to the faculty following a successful workplace debate. This debate serves as a stringent professional filter, often significantly enhancing the quality of dissertations.

The dissertation is evaluated during the debate by at least one opponent with a doctoral degree. The proceedings of the debate, especially opinions and suggestions regarding modifications, must be recorded in minutes. The opponent's opinion is attached as an annex. If the dissertation undergoes significant revision, the workplace debate must be repeated.

Once submitted, the BDIT appoints the defense committee according to the TDT and EDT regulations. The committee members receive the dissertation and thesis booklet in both printed and electronic formats. The identities of the opponents remain confidential until the reviews are completed. Committee members receive the opponents' reviews after both have been submitted and the candidate's responses at least one week before the defense in electronic form. Simultaneously with submission, the dissertation and Hungarian and English theses must be uploaded by the student to the university's Doctoral Repository (<http://doktori.bibl.u-szeged.hu/>). Upon public announcement of the defense, the dissertation and thesis booklet become publicly accessible on the www.doktori.hu website, which is linked to the doctoral school's website.

An opponent may request that the dissertation be checked with plagiarism detection software provided by the SZTE József Attila Study and Information Center.

The dissertation sent to the reviewers cannot be modified afterward. If the review committee finds scientific inaccuracies or rejects thesis points, the relevant section of the committee report is attached to the dissertation (also in electronic format), and the defended dissertation is made public with this addition (library, repository).

The dissertation defense takes place as a public debate. The university and faculty doctoral regulations dictate the composition and size of the defense committee. At least one-third of the five-member committee must be external experts not employed by the university. Two reviewers with expertise in the field assess the dissertation. Their written evaluations are sent to the candidate, who must respond to the questions in writing. The responses are evaluated, and the reviewers indicate in writing whether the answers are acceptable. The defense can only be organized once the reviewers' responses are received.

Based on the decision and evaluation of the defense committee, the BDIT submits a recommendation for degree awarding to the University Doctoral Council through the Scientific Field Doctoral Council. Both councils vote secretly, with the final degree being awarded by the University Doctoral Council based on prior decisions. The degree certificate is presented ceremoniously by the university's rector, to whom the candidate pledges an oath.

5. Monitoring

The BDIT annually evaluates students' academic performance and progress based on written reports and professional seminars. The annual report must include research results and publication metrics (including publications related to the doctoral topic, conference, and seminar presentations).

The BDIT monitors the career paths of graduates using a nationally standardized monitoring procedure (in development). The results are published in the periodic self-assessment reports of the doctoral school in the database at www.doktori.hu. The self-assessment also includes

other statistics related to the training (e.g., number of students, average time to degree, degree acquisition rates).

6. Concluding Remarks

The regulations aim to uphold the following quality assurance principles:

Professional Control

Ensuring scientific oversight throughout the entire doctoral training and degree acquisition process.

Transparency

The main phases of the quality assurance system should be widely transparent to the professional and scientific community.

Feedback

Instructors, supervisors, and members of various committees in the doctoral school should receive continuous feedback on the quality of their activities and have opportunities for feedback.

Individual Responsibility

It should be clearly defined who is responsible for what in the doctoral training process.

Documentation

All decision points related to doctoral training and degree acquisition should be documented. The operation of the quality management system should impose only minimal administrative burdens on the instructors and researchers involved in training and degree acquisition procedures.

Szeged, August 1, 2022