Quality Assurance Plan of the Doctoral School of Computer Science of the University of Szeged

Abbreviations:

DS: University of Szeged, Doctoral School of Computer Science
CDS: University of Szeged, Council of the Doctoral School of Computer Science
DCS: University of Szeged, Doctoral Council of Science and Engineering
UDC: University of Szeged, University Doctoral Council
USZRDT: University of Szeged, Regulations governing the doctoral training programmes and the awarding of the doctoral degree
RPDCS: Rules of Procedure of the Doctoral Council in Science and Engineering
OR: Operational Regulations of the Doctoral School of Computer Science of the University of Szeged
Institute: University of Szeged, Faculty of Science and Informatics, Institute of Informatics
Guidelines: the document titled "Quality Assurance Guidelines for Doctoral Training and the Awarding of the Doctoral Degree at the University of Szeged"

Quotations in italics are taken from the Guidelines and contain the required content elements. Some of these elements are defined in or follow directly from other university, faculty and DS policies. To avoid redundancies, these are indicated by reference.

1. Quality assurance requirements as regards the management / organisation of the DS

1.1. The quality assurance plans of the doctoral schools shall include the following:
a) the manner in which and intervals at which the doctoral school concerned will adopt and review said doctoral school's training regulations and quality assurance plan;
b) the manner in which said doctoral school will adopt its annual quality assurance report;
c) the manner in which said doctoral school will take steps to involve heads of programmes, supervisors and doctoral candidates in the regulatory, quality assurance and information management processes;
d) the manner in which said doctoral school will store annual quality assurance reports and make same public.
1.2. The quality assurance plans of the doctoral schools shall also include
a) the person responsible for quality assurance in the doctoral school concerned (the Doctoral Quality Assurance Officer);
b) the location at which and manner in which the Hungarian- and English-language public documents of the doctoral school (in particular regulations, forms etc.) can be accessed.
1.3. The quality assurance plans of the doctoral schools shall include the student's options for lodging complaints. In particular, it should be specified who has competence in the case of questions concerning the student's status as a student in the doctoral programme concerned.

The revision and adoption of DS policies, including the Training Programme and the Quality Assurance Plan, is governed by higher-level policies: the USZRDT, the RPDCS, and the OR. The DS policies are reviewed by the DS Head on an ongoing basis, based on current experience, feedback from supervisors, students, the DS Coordinator, administration, and core members, and on monitoring the regulatory environment, the DS Head submits proposals for changes to the CDS.

The annual quality assurance report of the DS is adopted by the CDS and submitted to the higher fora for approval (DCS, UDC).

All departments of the Institute are represented in the CDS. Subject supervisors and doctoral students are involved in the regulatory, quality assurance and information management processes through these representatives and the DS Secretary. In addition, one doctoral student is a member of the CDS with advisory rights and one doctoral student representative has voting rights in the Council of the Institute. At the beginning of each semester, the Head of the DS and the Secretary of the DS hold a briefing for new recruits, covering training and degree awarding issues as well as technical details. During the year, students receive direct information through the Secretary of the DS, through whom they can communicate their comments and questions to the CDS.

All public documents and information are also available on the DS website. The DS Rules of Procedure, Training Programme and Quality Assurance Plan will also be uploaded on the website of the Hungarian Doctoral Council (doktori.hu).

The Quality Assurance Officer of the DS is the Head of the DS.

The Department of Studies of the Faculty of Science and Informatics is responsible for the investigation of questions concerning student status. For other student complaints, students can contact either the DS Secretary or the CDS elected doctoral representative, who can raise any problems at CDS meetings.

2. Quality assurance requirements as regards the instructors of the DS

2.1. The quality assurance plans of the doctoral schools shall specify the academic/educational standards to be met by the persons who are supervisors and instructors in the doctoral school concerned.
2.2. The quality assurance plans of the doctoral schools shall specify the following:
a) the manner in which and the intervals at which the doctoral school concerned will review the composition of its core members and its teaching staff, and the conditions under which it may propose and recruit new announcers and instructors;
b) the conditions under which an internal supervisor's appointment as supervisor may be terminated if said conditions are not met;
c) the conditions under which an external supervisor may be involved in the supervision of a student;

d) the manner in which information available through student feedback will be made public and taken into account.
2.3. The quality assurance plans of the doctoral schools shall specify the manner in which the doctoral school concerned will strive for continuous improvement of the teaching environment and support of the teaching staff in the acquisition of new knowledge/methodologies at the highest level.

Expectations for those who hold supervisor and teaching posts in the DS are set out in the OR, including the withdrawal of topic proposal rights and the appointment of new supervisors. In terms of quality and compliance requirements and procedures, there is no difference between external (i. e. not employed by the Institute) and internal supervisors.

CDS reviews the composition of the core members and the teaching staff annually to ensure that it meets expectations.

The student evaluation of the lecturers and the processing and use of the data generated in this way are carried out in accordance with the Institute's procedures.

The Institute also ensures the continuous improvement of the educational environment (classrooms, computer network, hardware and software) and supports the participation of its staff in international conferences and research exchanges, through and beyond the participation in research projects, thus helping to ensure the highest level of new knowledge/methodologies.

3. Quality assurance requirements as regards academic requirements

3.1. The quality assurance plans of the doctoral schools shall include the following:
a) the manner in which and the intervals at which the research area announcement will be monitored and reviewed by the doctoral school concerned;
b) the manner in which said doctoral school will ensure quality-oriented admission of students to the doctoral training;
c) the manner in which said doctoral school will seek to ensure the transfer of theoretical and practical knowledge.

Doctoral topics are reviewed and revised by the CDS every six months.

[Further aspects are regulated in the following chapters.]

4. Quality assurance requirements during the doctoral admission procedure

1. The quality assurance plans of the doctoral schools shall include
a) requirements with regard to the members of the admission committee;
b) an objective description of the subject matter for the admission procedure, the admission scoring system and the ranking of applicants;

c) technical details of the admission procedure (offline/online admission examination).
2. The annual quality assurance reports of the doctoral schools shall include the annual experience of the admission procedure.

The criteria and functioning of the selection board are primarily governed by the OR and the relevant clauses of the RPDCS and USZRDT.

The annual experience of the recruitment process is reported in the DS's annual quality assurance reports.

5. Quality assurance requirements during the doctoral training

1. The quality assurance plans of the doctoral schools shall set out the manner in which the doctoral schools will ensure the following:
a) personnel and financial conditions, including knowledge and use of the latest methods and tools for assessment and physical and electronic access to research materials;
b) monitoring students' progress in the doctoral training;
c) supporting students' academic progress, including international mobility, networking and open access publishing;
d) uploading student publications to university repositories and recording bibliographic data for their publications in the MTMT;
e) an objective description of the process and requirements of the comprehensive examination, the assessment criteria and their regular review; and the manner in which the quality requirements for the members of the comprehensive examination committee are monitored;
f) the collection, processing and use of student feedback (in particular student satisfaction with training, courses, instructors, supervisors, administrative management and learning support tools) and data on student progress (in particular on drop-out rates) and the monitoring of the implementation of decisions taken on the basis of the information used.
2. The quality assurance plans of the doctoral schools shall indicate the manner in which and intervals at which the doctoral school concerned will monitor and review the topics and syllabi for compulsory and elective courses.
At the end of each academic semester, the doctoral student prepares the report required by the OR, which is reviewed by their supervisor. The reports are also reviewed by the Head of the DI and may also be inspected by the CDS. The DS also keeps a central record of the progress of doctoral students, which allows the monitoring of their publication performance over time.

The DS has a travel budget provided by the Institute, which can be applied for by doctoral students. The Institute provides doctoral students with their own work desk and desktop computer, and also provides financial support for student participation in conferences and summer schools through other channels, typically through grants.

Students receive a reminder each semester to upload their publications to the university repository and to update their bibliographic data in the Hungarian Scientific Bibliography

Database (MTMT). During the degree awarding process, this is checked by a representative responsible for the habitus investigation. As part of the degree-awarding process, doctoral dissertations and booklets are uploaded to the SZTE Repository of Dissertations.

The composition of the complex examination boards and the conduct of the examinations are based on the USZRDT, which contains the appropriate quality assurance elements.

Student feedback (in particular student satisfaction with the training, courses, lecturers, supervisors, administrative management and learning support tools) and data on student progress (in particular drop-out rates) are collected, processed and used by the DS Secretary. The decisions taken on the basis of the information used are recorded in the minutes of the CDS meetings and their implementation is monitored by the Head of the DS.

Courses to be taken in each semester are announced by the DS in the faculty curriculum. Every semester, the DS reviews the topics and themes of compulsory and optional courses, which are approved by the CDS.

6. Quality assurance requirements in awarding the doctoral degree

1. The quality assurance plans of the doctoral schools shall specify the following:
a) the manner in which the publication and foreign language requirements that constitute a prerequisite for the awarding of the degree will be monitored;
b) the quality guarantees for the procedure of awarding a degree in a foreign language;
c) the stage of the procedure at which the doctoral school will use the plagiarism detection software provided by the University of Szeged Klebelsberg Library to check the content of the dissertations;
d) where relevant, the objective evaluation criteria for the procedure and requirements of the in-house defence and the manner in which and intervals at which said procedure and requirements are monitored and reviewed by the doctoral school concerned;
e) the objective evaluation criteria for the procedure and requirements of the public defence and the manner in which and intervals at which said procedure and requirements are monitored and reviewed by the doctoral school concerned.
The publication and foreign language requirements as a prerequisite for the award of the degree will be checked by the designated referee according to the criteria described in the OR.

The award procedure may also be conducted in a foreign language. DS teachers are all active in the international academic community and therefore communicate in foreign languages (typically English) at an appropriate level, which allows the doctoral procedure to be conducted in a foreign language in addition to the foreign language training.

The DS will only consider high quality peer-reviewed journal articles and conference papers when checking the publication status of the dissertation. For these, the peer review process

includes a check for originality. The referee will also use the plagiarism detection software provided by the University of Szeged.

The workplace dispute (also known as in-house defence) is not mandatory according to the DS regulations, but its procedure and requirements are objectively assessed in the OR.

As regards the procedures and objective qualitative criteria for the public examination procedure and its requirements, the DS will act in accordance with the USZRDT and the RPDCS. In addition, the DS will aim to ensure that both opponents are external, one preferably foreign, and that opponents have not only a PhD degree but also experience in doctoral training (e. g. graduated PhD student or at least active supervision).

7. Requirements related to the use of artificial intelligence (AI)

Generative AI raises problems that need to be addressed.

- *The own contribution can be small* as generative AI tools allow for the creation of entire publications that can even be published, and there is precedent for this.
- *Plagiarism can even be generated unintentionally*, e.g., generating or even just improving a piece of text or illustration, or generating software may introduce parts taken from the work of others without reference.
- Without proper due diligence, *the correctness* of AI-generated results, text, links, or software *is not guaranteed*.

In the future, further rapid development of AI tools is expected, which will continuously deepen the above problems.

In addition to the problems, it must be taken into account that AI will irrevocably transform research methodology. AI tools can dramatically increase the efficiency of work, but at the same time, the role of researchers' creativity and work remains indispensable.

It is important to take this into account in regulations and, by allowing the use of new technologies, to emphasize the quality of research work and the existence of one's own contribution and responsibility.

Accordingly, we formulate the following two principles:

1. The research work in the doctoral thesis must predominantly contain one's own contribution, however, this may be a result achieved with the help of AI technologies available at the given time, if this is considered one's own contribution suitable for publication based on the current rules of the relevant professional community's prestigious forums.
2. The ethical and professional responsibility lies solely with the author, who is responsible for ensuring that the research itself, its results, and its presentation comply with the ethical standards of the professional community. Thus, any possible plagiarism,

falsification of data, or any violation resulting from the use of AI remains the author's responsibility.

The doctoral dissertation must include a **Declaration on the use of AI**, which must include a description of all AI technologies used, detailing which results they played a role in, and which parts of the dissertation they were used for.

It is strongly recommended to refer to the current principles of the authoritative forums in the field regarding the use of AI in the declaration, to help readers and reviewers judge whether the thesis complies with these principles.

Szeged, 12 December 2025