

Operational Regulations of the Doctoral School of Computer Science of the University of Szeged

This present regulation amends and applies the Government Decree (GD) 387/2012 (XII.19.) on Doctoral Schools, doctoral procedure, and habilitation and the Regulations Governing the Doctoral Training Programmes and the Awarding of the Doctoral Degree of the University of Szeged. The regulation pertains to doctoral students starting their studies in the 1st semester of the academic year 2016/2017 or later.

1. Address and Contact Data of the Doctoral School of Computer Science

Place of operation: University of Szeged
Faculty of Science and Informatics, Institute of Informatics
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2. The Structure and the Board of Leaders of the Doctoral School of Computer Science

2.1. The work of the DS is coordinated by the Council of the Doctoral School (hereinafter CDS). Members of the Council are:

- head of the DS, who is also the chair of the CDS, elected by the core members of the DS
- deputy head of the DS, who is also the deputy chair of the CDS, elected by the core members of the DS
- five further members of the DS, elected by the core members of the DS
- the secretary of the CDS has consultations rights; the secretary is appointed by the chair of the CDS after consultation with the DS.

The mandate of the members of the CDS is for three years, the secretary is also appointed for three years. If members of the CDS are incapacitated, pre-elected substitute members may use their voting rights.

2.2. The CDS arranges meetings as necessary, but at least once in a semester. Minutes are taken at the meetings.

2.3. The resolutions of the CDS – apart from voting with points – are passed according to the rule of majority decision making. In the event of a tie vote, the chair shall have the casting vote. (During the procedure of obtaining a doctoral degree, the members of the CDS vote with points; for details see the Regulations of Obtaining a Doctoral Degree below). A quorum shall exist at a CDS meeting, if the majority of its members with voting rights (or their substitute members) are present at the voting

2.4. CDS decisions made by voting – except for personnel issues, applications for a doctoral degree, the approval of the thesis for the defence procedure and the proposal about the awarding or the rejecting of the degree – are passed by open voting. If justified, any member, including the chair, may initiate a secret voting; about this issue the CDS decides with simple majority at an open voting.

2.5. In specific cases submitted by the chair of the CDS, and if open voting can be used, the CDS may make a decision through electronic voting (e-mail). Votes of members not replying until the given deadline are deemed invalid.

2.6. The issues on the agenda of the CDS meeting and necessary documents about the issues to be decided about must be made accessible for the members at least two days before the meeting – this may be done electronically.

2.7. The CDS makes decisions about the following issues concerning the DS (in accordance with the Doctoral Regulations of the University of Szeged):

- selecting new supervisors
- accepting new research topics recommended by supervisors
- specifying subjects of the doctoral programme for the given semester,
- organizing preliminary defences
- approving study trips and
- financial management of the incomes of the DS, in consent with the Board of Leaders of the Institute of Informatics.

2.8. The CDS makes proposals about the following issues concerning the DS:

- the Operational Regulations and Training Programme of the DS
- admittance of DS candidates
- initiating degree awarding procedures (in cases provided for in the relevant regulation of the University of Szeged)
- continuing degree awarding procedures
- compiling the subjects of the doctoral comprehensive exam
- appointing the members of the Comprehensive Examination Board and the Committee of Assessors of public defences,
- allowing the intermission of studies,
- awarding a doctoral degree,
- appointing the members of the Admission Committee,
- electing new core members,
- defining the internal structure of the DS and
- filling up the admission quotas assigned to the School by the Faculty.

2.9. The secretary of the CDS is responsible for the administration of the DS. The secretary of the CDS is a lecturer at the Institute of Informatics, with a doctoral degree. The secretary controls the following tasks:

- collecting research topics,
- collecting the courses planned for the given semester, inviting the lecturers,
- preparing the documents necessary for CDS decisions
- collection and preliminary evaluation of the semester reports of students,
- keeping record of student data,
- preparing statements and statistics
- managing the Hungarian Doctoral Database,
- maintenance of the webpage of the DS.

3. The Studies of Doctoral Students

3.0 The structured doctoral programme of the University of Szeged can be accomplished as a full-time training or as a correspondence course. This latter provides a possibility for those already working to obtain a doctoral degree.

3.1. Students can choose from the topics posted on the webpage of the DS and in the Hungarian Doctoral Database, upon agreement with the supervisor, or can join the programme as an individual doctoral student.

3.2. The CDS approves the supervisors and accepts the topics. To become a supervisor, the lecturer needs to have a doctoral degree in the field, and must have scientific achievements beyond the results that were necessary to obtain the degree.

3.3. Candidates for the structured programme take an oral entrance exam. The Admission Board ranks the candidates on the basis of scores given for the entrance exam, their previous scientific work and the classification of their university degrees. Students at the top of the list can get state-funded scholarships; others meeting minimal requirements can take part in the training programme as self-funded students.

3.4 Individual doctoral students can apply for the comprehensive exam if they have conducted research that fits into the profile of the DS, and has accomplished at least two-thirds of publication requirements. If the DS accepts the application, the candidate gets a minimum of 90 and a maximum of 160 credit points. The DS can appoint a supervisor for the individual student and can set out a fee to be paid.

3.5. The students pursue their studies according to the credit system devised and regularly revised by the CDS (see Appendix 1).

3.6. Supervisors are responsible for the scientific progress and studies of their students.

3.7. Students have to make a report about their work at the end of each semester, which has to be submitted to the secretary of the DS until a given deadline. Appendix 2 contains the form for the student's report.

3.8. Students may pursue their studies partly abroad during their training. The disbursement of grants of state-funded students are not interrupted during their studies abroad. The CDS makes a decision about accepting the subjects completed abroad.

3.9. During the first 4 semesters of their studies, upon request, students are bound to take part in the educational work of the Institute, by holding practical lessons/labs and by supervising state exam preparations and for drawing up the minutes of the state exam. Students are bound to hold a maximum of 4 lessons a week per semester; they can get hourly rates for their work. Students are bound to supervise state exam preparations and draw up state exam minutes at a maximum of two occasions per semester.

4. Regulations of Obtaining a Doctoral Degree

4.1. Students of the structured training programme and individual doctoral students can obtain their PhD degree within the framework of the doctoral procedure. The doctoral procedure consists of passing the doctoral comprehensive exam, completing the research and thesis stages and successfully defending the doctoral dissertation (thesis).

4.2. The candidate's publication activities have to meet the requirements described in Appendix 3.

4.3. To obtain the PhD degree, the candidate has to submit the doctoral dissertation within three years after the comprehensive exam. Besides the requirements stated in the Regulations

Governing the Doctoral Training Programmes and the Awarding of the Doctoral Degree of the University of Szeged, the DS prescribes the following:

- the length of the dissertation with the abstracts (and without the bibliography) has to be 80-120 pages,
- the language of the dissertation has to be Hungarian or English
- the majority of the results presented in the dissertation has to be published or accepted for publication at the time of submission; furthermore, in case of computer applications it is essential that the results are appraisable from a scientific point of view,
- the co-authors of the publications forming a part of the dissertation have to make a declaration about the contribution of the candidate to reaching the results; this is done by filling in the co-author's declaration (Appendix 4). If the co-author is incapacitated, this fact has to be proven (for example by correspondence with the colleagues of the co-author),
- parallel to submitting the dissertation, 10-12 pages long, Hungarian and English language abstracts of the main results of the dissertation also have to be submitted: 20 Hungarian and 5 English language copies, size A5,
- two copies of all publications containing the results presented in the dissertation also have to be submitted,
- the candidate has to define whether he/she wants the fulfilment of the publication criteria to be qualified according to area a) or b), which publications are to be considered, and which criterion each publication satisfies.

4.4. Before the official submission of the dissertation, upon the recommendation of the supervisor, a preliminary, closed defence may be organized. To start such a procedure, the publication requirements of Appendix 3 must be fulfilled, but the dissertation and the abstracts are not necessarily regarded as final, so these must be marked as "draft version". The documentation of the preliminary defence must be submitted to the secretary of the Doctoral School. The preliminary defence is organised by the supervisor, along the guidelines of the public defence procedure. Based on the comments made on the preliminary defence, and considering the remarks and the recommendations of the opponents, the candidate can revise the dissertation and the abstracts, and then officially submit the thesis. The Council of the Doctoral School aims at inviting the future opponents of the official defence to take part at the preliminary defence.

4.5. The doctoral procedure must be initiated at the Doctoral Institute of the University of Szeged.

4.6. The head of the DS appoints a coordinator (possibly but not necessarily a member of the CDS), who introduces the application, makes a proposal for initiating the doctoral procedure, and also proposes the subjects of the comprehensive examination and the members of the Comprehensive Examination Board, about which the CDS makes a decision by open voting.

4.7. When the candidate submits the dissertation, the appointed coordinator verifies if the candidate meets the necessary language and publication requirements, and if the dissertation meets the formal requirements, whether the majority of the research results in the dissertation are published and whether the dissertation contains the necessary co-authors' declaration; after this he makes a proposal to the CDS to initiate the doctoral procedure. The CDS makes a decision about the proposal by secret vote (on a scale of 0 to 5 points). The proposal is supported by the Council, if it gets at least 60% of all possible points. Upon the proposal of the coordinator, the CDS makes a decision by open voting about the members of the Committee of Assessors.

4.8. After the open disputation, considering its results, the CDS makes a decision about the awarding of the degree by secret vote.

Appendix 1. The Credit System

The credit system of the Doctoral School, compliant with the Doctoral Regulations of the University of Szeged, assures the principle of uniform assessment, and the transparency and consistency of the system of requirements. The following credit points can be obtained by students.

COMPULSORY MODULES TO CHOOSE FROM:

Research module: – Credit

Participation in research seminars (2 classes weekly)	3
Holding a lecture at a research seminar*	5
Holding a lecture at a Hungarian conference*	5
Holding a (foreign language) lecture at an international conference*	10
Accepted publication*	10
Research work	20
Professional practice abroad	15

The Accepted publication course can be accomplished by verifying the acceptance of the publication. The supervisor declares, whether the student's contribution is worth 10 credits of work. The Research work and the Professional experience abroad courses are evaluated by the supervisor, based on the written report of the student.

Courses marked with an * can be completed more times within a semester. Those without a * can be completed only once per semester.

Training module: visiting the courses of the given semester

Each course is worth 5 credits. Requirement: terminal exam

Education module: – Credit

Holding practical classes/labs (1 class weekly)	2
Holding practical classes/labs (2 classes weekly)	4
Holding practical classes/labs (3 classes weekly)	6
Holding practical classes/labs (4 classes weekly)	8

Educational credits can only be obtained by teaching at the Institute of Informatics of the University of Szeged.

Credit requirements for obtaining a pre-degree certificate: During the eight semesters students have to collect a minimum of 240 credits, as follows:

- a minimum of 20 and a maximum of 45 credit points must be obtained each semester
- minimum 140 credits from the Research module,
- minimum 25 credits from the Training module, at least 15 of which must come from theoretical courses
- by the end of the fourth semester, at least 5 courses must be completed from the Training module
- maximum 48 credits from the Education module.

At the beginning of each semester students have to consult their supervisors, and take up courses offered by the Council in a way, so that by the end of the fourth semester they will have completed at least 5 courses.

Appendix 2. Student's Report Form

Report of the PhD student

Academic year 20..-20.., I./II. semester

1. Name:

2. Grade:

3. Topic:

4. Supervisor:

5. Courses completed during the doctoral studies up to now, and marks obtained (complete list, not just the current semester):

6. Data of scientific activity:

a. Accepted or published papers up to now (complete list, not just the current semester; grouped into publications worth points and others):

b. Papers submitted for publication:

c. Scientific lectures:

d. Other (e.g.: reviewed articles, books):

7. A brief, abstract-like summary of achieved results:

8. Study trips:

9. Educational work, courses taught:

10. Language studies:

Szeged,

Student's signature

Observations of the supervisor concerning the above data.

Szeged,

Supervisor's signature

Appendix 3. Publication requirements

Publication requirements can be completed at the general information science or the engineering information technology area. The candidate determines which area's requirements are to be applied when evaluating his application for a doctoral degree. Verifying that papers are accepted for publication is sufficient at both areas.

a) Requirements of the area of general information science

The total score of the full length publications containing new scientific results of the doctoral candidate must be minimum 2.5. Scoring of publications:

- Single-author paper: 1.00 point
- Two-author paper: 0.75 point
- Three-author paper: 0.60 point
- Four-author paper: 0.48 point
- Five-author paper: 0.40 point
- Six-author paper: 0.32 point
- Seven-author paper: 0.25 point
- Eight-author paper: 0.20 point
- Nine-author paper: 0.15 point
- Ten or more-author paper: 0.10 point

A further stipulation is that in case of theoretical topics, papers must contain at least 1 one-author or 2 two-author papers.

In the area of general information science, the following count as publications:

1. *Peer-reviewed journal article*: Article appearing in a journal that is

- referenced by Mathematical Reviews, Zentralblatt für Mathematik, Computing Reviews or Inspec, or that is indexed in Web of Science or Scopus, or is
- published by some renowned scientific publisher (Academic Press, ACM, Cambridge University Press, IEEE Computer Society, IOS, Kluwer, MIT Press, Oxford University Press, Springer-Verlag, Elsevier, Wiley & Sons, World Scientific, Addison Wesley, Prentice Hall, North Holland, Birkhauser), provides an acknowledged professional forum, and has an internationally accepted editorial board.

2. *Book, book chapter*: If the book or the book containing the chapter is

- referenced by Mathematical Reviews, Zentralblatt für Mathematik, Computing Reviews or Inspec, or that is indexed in Web of Science or Scopus, or is
- published by some renowned scientific publisher (Academic Press, ACM, Cambridge University Press, IEEE Computer Society, IOS, Kluwer, MIT Press, Oxford University Press, Springer-Verlag, Elsevier, Wiley & Sons, World Scientific, Addison Wesley, Prentice Hall, North Holland, Birkhauser), and provides an acknowledged professional forum.

3. *Paper appearing in a conference (symposium, workshop) publication*: Paper appearing in a publication that is

- referenced by Mathematical Reviews, Zentralblatt für Mathematik, Computing Reviews or Inspec, or that is indexed in Web of Science or Scopus, or is
- a publication of an international conference (symposium, workshop), that is an internationally acknowledged, highly ranked professional forum of the field, with an

international program committee; furthermore, more than 50% of the authors of accepted papers are foreign, and the rate of acceptance is usually maximum 50%.

b) Requirements of the area of engineering information technology

The doctoral candidate must have at least 4 full length publications containing new scientific results, that meet the below requirements:

- their total score is at least 12 points,
- at least 2 of them are peer reviewed, foreign language journal articles, one of which appeared (or will appear) in a journal indexed in Web of Science or Scopus and
- at least 2 of them are foreign language, which are worth at least 50% of the points below.

Publication scores:

- **Book**
 - Foreign language 8
 - Hungarian 5
- **Part of a book, book chapter**
 - Foreign language 6
 - Hungarian 3
- **Journal article**
 - Peer-reviewed
 - Foreign language, published abroad 6
 - Foreign language, published in Hungary 4
 - Hungarian language 2
 - Not peer-reviewed
 - Foreign language, published abroad 3
 - Foreign language, published in Hungary 2
 - Hungarian language 1
- Conference proceedings article, at least 4 pages
 - Foreign language article at an international conference 3
 - Foreign language article at a Hungarian conference 2
 - Hungarian language 1
- Patent 2
- Electronic publication¹ 1

The above publications are to be divided with the number of authors, excluding the supervisor and the co-supervisor.

¹ On the webpage of a journal or company, appears in the result list of *google scholar* (being published at a personal homepage does not earn any points).

Appendix 4. Co-author's declarations

1) Hungarian co-author

Co-author's declaration

I hereby certify that I am familiar with the thesis of the PhD applicant Mr/Ms ... entitled

Regarding our jointly published results that form part of this PhD dissertation, I declare the followings:

The applicant's contribution was prominent in obtaining the following results:

..... ,

and I did not and will not use these results in getting an academic research degree.

Regarding the following publications, the contribution of the applicant and me is indistributable:

..... .

date, signature

2) Incapacitated co-author

Declaration about incapacitated co-author(s)

I hereby declare that due to their incapacitation, I could not obtain a co-author's declaration from the co-author(s) of the publication(s):

.....

containing the result(s):

.....

Please find the document verifying /reinforcing the co-author's incapacitation attached.

date, signature of the applicant

3) Foreign co-author

Co-author's declaration

I hereby certify that I am familiar with the thesis of the applicant Mr/Ms ... entitled

Regarding our jointly obtained results that form part of this PhD dissertation, I declare the followings:

The applicant's contribution was prominent in obtaining the following results:

.....

I did not and will not use these results in getting an academic research degree.

Regarding our joint results referred to in this thesis, the following ones were obtained as the result of indistributable joint contribution by the applicant and myself:

.....

date, signature

Appendix 5. Language requirements

One of the two languages laid down by law must be English. The other language must be German, French, Italian, Spanish or Russian, or the official language of one of the neighbouring countries. As a further option, upon the candidates' application the Council of the Doctoral School can accept a different foreign language, about which the candidates can prove, that they use it in their scientific research.