DOCTORAL SCHOOL OF
INFORMATION SCIENCE AND TECHNOLOGY

Regulations

Approved by the Doctoral School Council
on 21 October 2020

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The Hungarian Accreditation Committee accredited the Doctoral School of Information Science and Technology (DSIST) in 2001 as the successor of the Doctoral Program "Technical Applications of Information Technology" of the University of Pannonia (UP).

The core members of the Doctoral School of Information Science and Technology are:
- Katalin Hangos, full professor, DSc (Head of the Doctoral School)
- Károly Bezdek, full professor, DSc
- György Dósa, full professor, DSc
- Ferenc Hartung, full professor, DSc
- Mihály Pituk, full professor, DSc
- Zsolt Tuza, full professor, DSc
- Botond Bertók, associate professor, PhD
- László Czúni, associate professor, PhD
- István Vassányi, associate professor with habilitation, PhD

The emeritus core members of DSIST are:
- István Győri professor emeritus, DSc
- Klemeš Jiří professor emeritus, DSc
- György Kozmann professor emeritus, DSc
- István Maros professor emeritus, DSc

The present Regulations supplement the "Doctoral Rules" and the "Habilitation Regulations" accepted by the Senate of the University of Pannonia on 23 February 2017 and 15 July 2019. Regulations address the questions and procedures in the scope of authority of the Doctoral School, considering the characteristics of information science and technology.

Address of the Doctoral School:
Location: Faculty of Information Technology, University of Pannonia
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1. The Composition and Activity of the Doctoral School Council

1.1. The members of the Doctoral School Council (DSC), appointed by the University Doctoral Council, are the following:

Head: Katalin Hangos, full professor, DSc
Internal members: György Dósa, full professor, DSc
                              László Czúni, associate professor, PhD
External members: Zoltán Kató, full professor, DSc
                              László Pap, professor emeritus, DSc
                              Gábor Szederkényi, full professor, DSc
Secretary: Görbe Péter, senior lecturer
A student representative delegated by the PhD Students' Council.

1.2. DSC meetings are held as necessary but at least once a semester. Meetings address and decide on the issues falling within the competence of DSC.

1.3. Voting rights are given to the Head of the DSC, to internal and external members.

1.4. The Council makes its decisions by majority vote. In case of an equal number of votes, the vote of the Head decides. Quorum is two-thirds of members with voting rights present.

1.5. The Council makes its decisions by public votes in general. Members with voting rights can request a secret vote in a reasonable case.

1.6. Meeting minutes are taken during DSC meetings, made public for the lecturers and students of the Doctoral School within five workdays after the meeting, and stored in the Doctoral School Archives.

1.7. In a reasonable case, the Head of the Council can propose an electronic vote by e-mail or online. Deadlines defined in section 1.8 hold are still to be met in such cases.

1.8. Access for Council members to materials related to making decisions must be provided at least two workdays before the meeting, which can be done electronically. Council members must be notified about the meeting's date and agenda at least five workdays before the meeting.

1.9. The DSC decides on the following issues (see Doctoral Rules of UP section (7) of §5):
   • matters related to subjects (announcing a doctoral subject, accepting its syllabus, deciding on its credit value);
   • matters related to the Comprehensive Exam / Doctoral Final Exam (the major and minor subjects and their syllabus);
   • announcement of PhD topics for the Organised Programme and accepting the supervisors;
   • approving the study plans of PhD students in the Organised Programme (the plan contains both the research plan and the study plan);
   • approving study plan modifications of PhD students in the Organised Programme;

- evaluating the applications for individual preparation (deciding whether the requested research topic belongs to the scope of the Doctoral School and if the minimum requirements for publication and language knowledge are met);
- evaluating the semi-annual reports of the PhD students in the Organised Programme;
- approving the subjects for Comprehensive Exams and Doctoral Final Exams for the candidate;
- appointing the members of the comprehensive exam and public defence committees;
- evaluating applications for exam exemptions;
- managing the financial support available for the Doctoral School;
- evaluating public defence applications. Appointing the opponents and members of the public defence committee.

1.10. The documents and certificates prescribed by the Doctoral Rules necessary for the Doctoral Council's decisions must be submitted to the Doctoral Council's secretary via e-mail (di@virt.uni-pannon.hu) at least seven workdays before the meeting. A request form addressed to the Head of the DSC must also be attached. The only exceptions are documents to be submitted in printed form: see section 2.5.

1.11. The Doctoral School maintains an online, digital archive to store all documents related to its activity and PhD students' matters.

2. Conditions for Obtaining a Doctoral Degree and the Doctoral Procedure

2.1. The Doctoral Rules of UP regulate the general conditions for obtaining a doctoral degree and the procedures. The Doctoral School regulates the minimum requirements for publication and language knowledge, the organization of the research centre debate and the preparation of the co-author declarations, considering the specific characteristics of information science and technology.

2.2. The minimum publication requirement for obtaining a doctoral degree is **having two scientific papers published in international peer-reviewed journals with SCI impact factors**. These publications must be certified by presenting their reprints or the acceptance letters and manuscripts copies. Articles published must be registered in the Hungarian Scientific Bibliography (MTMT).

2.3. Meeting the minimum publication requirement is verified by the DSC when the PhD dissertation is submitted. If publication requirements are not met, the PhD dissertation may not be admitted to defence.

2.4. The minimum language knowledge requirement is English level B2, certified by a Hungarian state-administered language certificate of type C (combined) - or any equivalent accredited language exam. In addition, a second language certificate of a different living world language (German, Spanish, French, Russian, Japanese, Chinese, Arabic) is also required. The DSC's approval is required for certificates of languages not listed here. Hungarian is accepted as a second language for non-Hungarian candidates.

2.5. The candidate initiates the Doctoral Procedure for obtaining a PhD degree by submitting the necessary application form to the DSC. The required attachments of the application, according to the Doctoral Rules of UP, are:

<u>in paper form</u>:

- two identical printed and bound copies of the doctoral dissertation (its length without the appendix not exceeding 100 pages);
- five Hungarian and five English copies of the theses booklet (abstract);
- an official copy of each language exam certificate not already submitted during the doctoral school enrolment process. The University's Directorate of Academic Affairs can also verify the original certificate.

<u>in electronic (pdf) form</u>:

- the doctoral dissertation;
- the theses booklet (abstract) in both Hungarian and English as separate files;
- the record and list of participants at the research centre debate;
- a Curriculum Vitae written in third person, maximum one page long;
- the list of publications related to the topic of the dissertation along with their reprints or the acceptance letters;
- a signed statement of non-foreign co-authors without a degree in information science/technology or mathematics, in which they agree that the results presented in the joint publication may be part of the doctoral dissertation. PhD students co-authors also have to declare to what extent the results used are the contributions of the given candidate;
- a signed statement of the candidate declaring that the dissertation is of their own work and that the references are unambiguous and complete;
- a signed statement of the supervisor declaring that the dissertation meets scientific standards;
- the scanned proof of payment for the procedure fee;
- a signed application for admission to the comprehensive doctoral examination. The defence may be held only after a successful comprehensive examination;
- a signed application for admission to the defence.

2.6. The research centre debate ("munkahelyi vita") of the doctoral dissertation takes place at the candidate's research centre or a committee meeting of the Hungarian Academy of Sciences. Meeting minutes are taken at the research centre debate, including all participants' names, workplaces, and scientific degrees. The head of the candidate's research centre or that of the academic committee appoints two reviewers (opponents) with scientific degrees in the research centre debate. The opponents' written reviews are a required attachment to the minutes. At least two core members of the DSIST or two members of the DSC must be present at the research centre debate.

2.7. All lecturers and students of the Doctoral School of Information Science and Technology are invited to the research centre debates and public defences.

2.8. The Doctoral Rules of UP regulate the public defence process. The DCS is responsible for appointing the two opponents and the reviewing committee. The public defence can be expected to take place five months after submitting the thesis.

3. PhD Students in the Organised Programme (enrolled before 1 September 2016)

3.1. A PhD student has to earn at least 180 credits during a 36 months period, as described in the Credit Regulations of the Doctoral School.

3.2. Credits for doctoral subjects completed in other doctoral schools (both Hungarian and foreign) can be accounted into the coursework credits. The DSC approves the completion based on the supervisor's support and the candidate's DSC-approved study plan. Subjects on the DSIST's recommended subjects list are approved automatically.

3.3. The completion of all the doctoral programme requirements (receiving the "absolutorium") is verified by the Directorate of Academic Affairs of UP based on the Education System's data.

3.4. A PhD student can request the approval of the subjects selected for the Doctoral Final Exam ("szigorlat") and the appointment of the Exam Committee from the DSC once the required number of credits are earned. The request is to be sent to di@virt.uni-pannon.hu.

3.5. The Final Exam can be completed as part of the Programme if all credit requirements are met, or before the dissertation submission deadline if the absolutorium was received.

3.6. The semi-annual reports of PhD students are mandatory subjects in the Doctoral Programme. They consist of a mandatory written part and an oral presentation. The supervisor's written approval of the report is also required. It must be signed by both the student and the supervisor and submitted as a pdf to di@virt.uni-pannon.hu.

3.7. The semi-annual reports' oral part is usually held as a public mini-conference, where all the lecturers and students of the DSIST are invited. The DSIST Head may release the obligation of the oral report in case of the student staying abroad or having an illness.

3.8. The semi-annual report is reviewed by a committee appointed by the DSIST Head. Their written review is sent to the student, the supervisor(s), and the DCS members. Failure to complete the report, either by the lack of cooperation or by the committee's rejective decision, results in the student losing their state-funded scholarship (meaning they can continue only in a self-founded status).

3A. PhD Students in the Organised Programme (enrolled after 1 September 2016)

3A.1. PhD students must earn 240 credits during a total of 8 semesters, as stated in §8 of the Doctoral Rules of UP. The Programme is divided into two phases, the coursework and research (semesters no. 1-4) and the research and dissertation phases (semesters 5-8).

3A.2. Credits for doctoral subjects completed in other doctoral schools (both Hungarian and foreign) can be accounted into the coursework credits. The DSC approves the completion based on the supervisor's support and the candidate's DSC-approved study plan. Subjects on the DSIST's recommended subjects list are approved automatically.

3A.3. The completion of all the doctoral programme requirements (receiving the "absolutorium") is verified by the Directorate of Academic Affairs of UP based on the Education System's data.

3A.4. A PhD student can request the approval of the subjects selected for the Comprehensive Exam and the appointment of the Comprehensive Exam Committee from the DSC once the required number of credits are earned. The request is to be sent to di@virt.uni-pannon.hu.

3A.5. The semi-annual reports of PhD students are mandatory subjects in the Doctoral Programme. They consist of a mandatory written part and an oral presentation. The supervisor's written approval of the report is also required. It must be signed by both the student and the supervisor and submitted as a pdf to di@virt.uni-pannon.hu.

3A.6. The semi-annual reports' oral part is usually held as a public mini-conference, where all the lecturers and students of the DSIST are invited. The DSIST Head may release the obligation of the oral report in case of the student staying abroad or having an illness.

3A.7. The semi-annual report is reviewed by a committee appointed by the DSIST Head. Their written review is sent to the student, the supervisor(s), and the DCS members. Failure to complete the report, either by the lack of cooperation or by the committee's rejective decision, results in the student losing their state-funded scholarship (meaning they can continue only in a self-founded status)

4. Individual Preparation

4.1. The application for individual preparation must be submitted to the DSC, following the requirements listed in §9 of the Doctoral Rules of UP. The application must also be sent in electronic form (as a pdf) to di@virt.uni-pannon.hu. The DSC examines whether the research topic is in the scope of the Doctoral School and if the minimum publication and language knowledge requirements are met. If not, the application is not supported.

4.2. The publication activity in the five-year-long period preceding the application must meet the minimum publication requirements. Time spent on parental leave in Hungary (GYES and GYED) does not count toward the five-year limit.

4.3. The enrolled student starts the research and dissertation phase of the Doctoral Programme and will receive a student status.

4.4. The dissertation's submission is regulated in §13 of the Doctoral Rules of UP and section 2.5 of this current regulation.

4.5. Publications relevant to the research topic from the five-year-long period prior to the application can contribute towards the 120 publication credits required for the research and dissertation phase. The DSC verifies these publications, which must be registered in the Hungarian Scientific Bibliography (MTMT).

5. Supervisors and Consultants

5.1. Supervisors in the DSIST and Consultants of PhD students doing individual preparation must have a scientific degree, be able to oversee scientific research, and have sufficient publication activity.

5.2. The DSC verifies the suitability of PhD student Supervisors in the Organised Programme when the doctoral topic is announced. Consultants are reviewed as part of the verification procedure of applications for individual preparation enrolments.

5.3. The minimum publication requirement for Supervisors and Consultants is having two research papers published for each PhD student. These papers must be published in international peer-reviewed journals matching the scientific scope of the DSIST, within a five-year-long period prior to the appointment is made.

6. DSIST members - Core Members and Emeritus Core Members

6.1. The list of DSIST members may change as necessary, based on the Core Members Committee's decision. The DSC Head requests necessary appointments and discharges from the University Doctoral Council.

6.2. DSIST members have the right to announce doctoral subjects for PhD students in the Structured Programme and to be supervisors or consultants of PhD students without further examination.

6.3. DSIST members are invited to the public defences organized by the Doctoral School and to the oral part of the PhD students' semi-annual reports.

7. Habilitation

7.1. The Disciplinary Doctoral and Habilitation Council

The University Doctoral and Habilitation Council (UDHC) has established the Disciplinary Doctoral and Habilitation Council of Information Science and Technology (DDHC-IST) based on the University's Habilitation Regulations by inviting and appointing the following members:

President:	Katalin Hangos, full professor DSc
Internal members:	Ferenc Hartung, full professor, DSc
	György Dósa, full professor, DSc
External members:	Zoltán Kató, full professor, DSc
	László Pap, professor emeritus, DSc

Gábor Szederkényi, full professor, DSc

7.2. The habilitation procedure and its requirements are given in the University's Habilitation Regulations. The doctoral school regulates the minimum publication and mentoring requirements with regards to the characteristics of the fields of Information Science and Technology (IST).

7.3. Accepted disciplines for habilitation

The DDHC-IST accepts habilitation requests that fit the Doctoral School's research fields. These fields are listed on the homepage of the Doctoral School:
    Dynamic systems
    Discrete structures and algorithms
    Image and signal processing
    Optimization of large-scale systems and processes
    Medical and Health Informatics
The DDHC-IST decides in accepting requests related to other research topics. The habilitation request must precisely define the exact research field(s).

7.4. The University's Habilitation Regulations define the minimal publication requirements for the fields of IST as 50% of what is necessary for receiving a DSc degree. These requirements are interpreted as that given by the Section of Engineering Sciences of the Hungarian Academy of Sciences, which defines the expected quality and quantity publications and of the references (Q and I values).
The fulfillment of the above requirements must be demonstrated in the habilitation application based on the candidate's data in the Hungarian Scientific Bibliography (MTMT).

7.5. A further publication requirement is that the candidate must have five publications in international peer-reviewed journals or high-level international conference proceedings within the research field defined in the application. The publications must be from the five-year-long period prior to the application. (This requirement meets that of the Hungarian Accreditation Committee for being a core member).

7.6. The minimal mentoring requirement is that the candidate is currently a supervisor or has at least one PhD student who graduated in the fields of IST (either as a supervisor or a co-supervisor).

7.7. The habilitation request and its appendices must be submitted in paper form to the Directorate of Academic Affairs, as given by the University's Habilitation Regulations, and in electronic form to the secretary of the Doctoral School at di@virt.uni-pannon.hu.

7.8. All the separate documents must be merged into one pdf file with a table of contents in electronic submissions. The detailed results of the Tud-O-Méter software for calculating the Q and I values (as given in section 8.4) must also be provided.

7.9. The public lecture is to be held in Hungarian (English is allowed in justified cases, with the prior permission of the DSC), and the colloquium is in English. The habilitation theses are to be submitted both in Hungarian and English. The reviews are prepared in English.

Approved by the Doctoral School Council
on 21 October 2020

List of Abbreviations

DSIST	Doctoral School of Information Science and Technology
UP	University of Pannonia
DSC	Doctoral School Council
MTMT	Magyar Tudományos Művek Tára - Hungarian Scientific Bibliography
UDHC	University Doctoral and Habilitation Council
DDHC-IST	Disciplinary Doctoral and Habilitation Council of Information Science and Technology
IST	Information Science and Technology

This document was accepted by the Doctoral School Council of the Doctoral School of Information Science and Technology of the University of Pannonia on 21 October 2020.