Obuda University

Doctoral School of
Applied Informatics
and
Applied Mathematics

Operational Regulations

14 February 2025

The name of the doctoral school:

Doctoral School of Applied Informatics and Applied Mathematics

Headquarters:

Obuda University
1034 Budapest, Bécsi út 96/b.

Led by:

Gyula Simon, professor, DSc

Its Core Members are:

Árpád Baricz, professor, Dr. habil., PhD
Péter Galambos, professor, Dr. habil., PhD
Tamás Haidegger, professor, Dr. habil., PhD
László Horváth, professor emeritus, Dr. habil., CSc
Levente Kovács, professor, Dr. habil., PhD
Miklós Kozlovszky, professor, Dr. habil., PhD
Sándor Kristály, professor, Dr. habil., DSc
Péter Tibor Nagy, professor emeritus, Dr. habil, DSc
Tibor Pogány, professor, PhD
Simon Gyula, professor, Dr. habil., DSc
Sándor Szénási, professor, Dr. habil., PhD
József Tar, professor, Dr. habil., DSc
Annamária Várkonyiné Kóczy, professor, Dr. habil., DSc

The Operational Regulations of the Doctoral School of Applied Informatics and Applied Mathematics (hereinafter referred to as the "Regulations") are based on Act CCIV of 2011 on National Higher Education (hereinafter: Nftv.), Government Decree No. 387/2012, the resolution of the Hungarian Accreditation Committee for Higher Education (hereinafter referred to as MAB) on the establishment and operation of doctoral schools, and Act XLI of 2023 on the amendment of certain acts necessary to promote the economic exploitation of innovation and scientific results, also amending Government Decree No. 387/2012 on the establishment and operation of doctoral schools), and of the Doctoral and Habilitation Regulations of Obuda University (hereinafter referred to as the EDHSz), in accordance with the provisions of its version (in force from 19 September 2023, consolidated with the amendments, Version 11).

I. General provisions

The Operational Regulations of the Doctoral School of Applied Informatics and Applied Mathematics of Obuda University were drawn up as a supplement to the Doctoral and Habilitation Regulations of the University (hereinafter referred to as the "EDHSz") adopted by the University Senate, to regulate the issues and procedures referred to the competence of the doctoral schools, taking into account the special situation and the special characteristics of the disciplines of informatics and mathematics.

Subject matter and powers of the code

1. §

(1) The Doctoral School of Applied Informatics and Applied Mathematics operates directly under the supervision of the Rector, and the administrative tasks related to the students of the School are performed by the School and the University Doctoral and Habilitation Office. [Cf. § 3 (9) of EDHSz]

(2) In the work of the Doctoral School (hereinafter referred to as the "DI"), in addition to the core members, lecturers and supervisors from other universities and research institutions in Hungary or abroad may also participate as lecturers and supervisors.

(3) The structure of the Doctoral School shall be governed by the Doctoral and Habilitation Regulations of the University. [§ 11, § 12 of EDHSz]

(4) The EDHSz shall determine the tasks of the Council of the Doctoral School (hereinafter referred to as DIT). [§ 14 of EDHSz]

(5) The regulations of the Doctoral School shall be determined by the Regulations for Studies and Examinations of Obuda University (hereinafter referred to as TVSz), and the EDHSz.

On doctoral education and obtaining a degree

2. §

(1) The consecutive training cycles of higher education providing a higher level of qualification are bachelor's, master's and doctoral training [§ 3 (1) of Nftv.].

(2) Doctoral training is part of the institutional training program, which prepares students for the doctoral degree in the post-master's degree program [Nftv. § 16]. Doctoral training is a prerequisite for the doctoral degree, but not a sufficient condition. The procedure for the award of a doctorate includes a complex examination (§ 24 of the EDHSz), the demonstration of aptitude for independent research and new scientific results, proof of the required knowledge of foreign languages, and the public presentation and defense of a thesis containing the solution of an independent scientific problem.

(3) The DI is the organizational framework for doctoral studies, which is based on the decision of the Senate, subject to the approval of the MAB (Hungarian Accreditation Committee).

(4) The details of the initiation of the procedure for the award of a doctorate are regulated by the EDHSz in the chapter "*Initiation of the doctoral degree procedure, workplace dispute § 28*".

II. Structure of the Doctoral School

3. §

(1) The operation of the Doctoral School is directed by the Head of the DI [§ 11 of EDHSz].

(2) The body assisting the Head of the Doctoral School is the Council of the Doctoral School (hereinafter referred to as DIT), elected by the core members of the Doctoral School (the Council of Core Members, hereinafter referred to as TT) [§ 11 of EDHSz]. The lecturers of the doctoral school shall be those lecturers and researchers with an academic degree who, on the recommendation of the head of the doctoral school, are considered by the DIT to be suitable for teaching in the framework of the doctoral school [§ 12 of the EDHSz].

(3) The International Advisory Board assists the DI in its work. The International Advisory Board gives its opinion on the curriculum and research program of the Doctoral School and may propose subjects and research topics for inclusion. It summarizes the development trends in the disciplines of the DI's research areas and makes proposals for the expansion of the DI's international cooperation. The International Advisory Board may propose the award of an honorary doctorate each year.

(4) The Head of the Doctoral School is assisted by an Operations Director, appointed by the Rector. The Operations Director is responsible for the management of the DI, for monitoring the credit accumulation process of PhD students during the semester reports, with the involvement and agreement of the student after his/her report, and for the tasks which, according to the "Quality Assurance Plan" in force, are the responsibility of the secretary in a doctoral school that has a secretary: organizing the operational quality assurance activities of the DI, ensuring, together with the Head of the DI, the application at DI level of the overall set of criteria of the institutional quality assurance procedures for the DI, updating the DI documents to comply with any necessary changes in legislation/government decisions, together with the Head of the DI, coordinating the consultation of external partners for their opinions and comments on the various examinations and other professional events (complex examinations, workshops, public debates, professional forums, workshops, doctoral conferences, etc.), preparing and processing the once-a-year anonymous survey of student, tutor and subject satisfaction, together with the head of the DI, keeping records of doctoral graduates, managing the DI's communication interfaces, organizing the DI's operational quality assurance activities.

(5) Within the Doctoral School, two programs have been set up along two close, yet distinct disciplines, with the aim that Program Directors can monitor students' work and support their progress in a discipline-specific way. Both programs include sub-programs, with designated Program and Sub-Program Directors. The Program Directors are responsible for reviewing research topics submitted to the Doctoral School; decision of acceptance is made by the Head of the Doctoral School. The Program and Sub-Program Directors monitor the progress of the students and participate in the end-of-semester reports as members of the examination committee. If they consider that a student's progress does not follow the required pace, they will initiate a progress meeting with the student and/or their supervisor

to identify and understand the problems and outline options to keep the doctoral study on track.

Head of the Doctoral School

4. §

(1) The head of the DI shall be elected by the Doctoral and Habilitation Council of the University (hereinafter referred to as EDHT) on the proposal of the majority of the members and appointed by the Rector [11. § (2) of EDHSz].

(2) The Head of the Doctoral School

a) shall be responsible for the academic quality and the teaching of the DI [§ 11. (1) of EDHSz]

b) performs the tasks prescribed for him/her in the EDHSz, TVSz and the present "Regulations".

c) performs the duties of the Chairman of the DIT [§ 14 (1) of EDHSz], including:

d) making proposals to the DIT on the use of the human and material resources made available to the doctoral school,

e) proposing the subjects of the complex examination and the composition of the examination board,

(f) propose the composition of the official assessors (opponents) and the composition of the evaluation committee.

(g) be responsible for the management of the DI.

The Council of the Doctoral School (DIT)

5. §

(1) The DIT is a body assisting the Head of the Doctoral School, whose members and Vice-Chair are elected by the Council of the Core Members (hereinafter referred to as TT). Doctoral School teachers are those teachers and researchers with an academic degree who, on the recommendation of the head of the doctoral school, are considered by the DIT to be suitable for teaching in the doctoral school.

(2) The staff of the DIT shall ensure adequate professional coverage of the subject areas cultivated.

(3) The tasks of the DIT are defined by the EDHSz.

(4) The DIT shall meet as necessary, but at least once every six months, and decide on matters within its competence.

(5) The Chairman and the members of the DIT shall be entitled to vote, except for the election of members of the DIT, where only the DI's core members shall be entitled to vote. The student representative of the DIT shall have the right of deliberation.

(6) The quorum of the DIT shall be at least half of its voting members.

(7) Decisions of the DIT shall normally be taken by a simple majority by open ballot. In the case of equality of votes, the Chairman shall have a casting vote. In justified cases, any member may request a secret ballot, or the Chairperson may initiate a secret ballot.

(8) The DIT shall take its decisions on personnel matters by secret ballot. The name of each candidate shall be indicated on the ballot paper; voters shall indicate all candidates acceptable to them. The candidate or candidates receiving the highest number of votes shall be proposed for the ballot. In the event of more than one candidate receiving equal votes, the Chairman shall decide.

(9) In the case of personal matters, a person who, with the person concerned,

  (a) has a direct employment relationship (manager-employee relationship), or
  (b) a close relative, or
  (c) has been a scientific co-author within the last five years, or
  (d) who cannot be expected to give an objective assessment of the case for any other reason
  is not allowed to participate in the voting process.

(10) In the case of an opinion on the award of a degree, the DIT shall apply a yes-no vote [§ 34 (1) of EDHSz]. On the proposal of the DIT's Chairman, in urgent or justified cases, the DIT may take a decision by electronic means (e-mail).

(11) The materials required for items on the agenda of a DIT meeting requiring a decision shall be made available to members at least three working days before the meeting. The publication may be made electronically. The date of the meeting, together with the proposed agenda, shall be communicated to the members at least 5 working days before the meeting.

(12) Minutes of the DIT meetings shall be taken and shall be available to the DI faculty and students within ten working days after the meeting and shall be deposited in the DI Archives.

Teachers and supervisors of the Doctoral School

6. §

(1) The lecturers of the doctoral school shall be those academics and researchers with a scientific degree who, on the recommendation of the head of the doctoral school, are considered by the DIT to be suitable for teaching in the doctoral school [12. § (1) of EDHSz]. The Core Members and lecturers of the doctoral school may also be appointed as lecturers in other doctoral schools.

(2) The leader of a doctoral topic shall be a lecturer or researcher with an academic degree and active research activity, whose topic announcement has been approved by the DIT on the basis of his/her application or invitation. A supervisor may not have more than six doctoral candidates with a state scholarship at the same time.

(3) A doctoral student may have a maximum of two supervisors, who shall be documented in Register, who shall responsibly guide, support and evaluate the studies and research work of the doctoral student working on the topic and the preparation of the doctoral candidate for the award of a degree. In addition to an external supervisor, the DIT will appoint an internal co-supervisor who will assist the supervisor and monitor the student's progress. The DIT appoints a responsible supervisor from among the two supervisors [12. § (5) of EDHSz].

Communication of the doctoral school

7. §

(1) The DI shall provide, through its website, continuous and regularly updated information on the functioning of the school on the following topics

- the discipline of the school, the name of the doctoral degree that can be obtained,
- the names and curricula vitae of the members of the staff and of the teaching staff,
- national and international academic contacts,
- operational rules,
- the training plan,
- quality assurance plan.

(2) Provide continuous and regularly updated information on doctoral training through the DI website.

- the doctoral topics approved by the DIT and their supervisors,
- the admission requirements,
- the announcement and dates of the admission procedure,
- the requirements for the award of the doctoral degree,
- the study and examination regulations,
- the subjects taught,

- the doctoral topics advertised.

(3) The DI shall provide, through its website, continuous and regularly updated information on the effectiveness of the DI, making available

- the electronic version of PhD theses and dissertations,
- a list of all degree holders.

(4) The DI shall update its website at least once a month. The DI shall ensure that up-to-date information about the DI is constantly available on the database pages www.doktori.hu.

III. Doctoral training

Application, admission procedure

8. §

(1) The general conditions for application are set out in the EDHSz [§ 19 of EDHSz].

(2) Applications for doctoral studies must include the following documents:

  a) a completed application form (Annex D6);
  b) a document certifying payment of the admission fee;
  c) a copy of the MSc/MA/university diploma (together with the original);
  d) copies of documents certifying your language skills (together with the originals);
  e) curriculum vitae with list of publications;
  f) a letter of acceptance from the institute or research center of your choice and from your supervisor (in the case of applications for a scholarship);
  g) a preliminary research plan (1-2 pages) with a vision of the prospective supervisor(s), in the case of applicants for individual training, a list of publications of the applicant;
  h) for individual candidates, a statement of support from the workplace;
  i) other documents (e.g., references);
  j) a declaration of whether or not you wish to be admitted if you are not in receipt of a scholarship.

(3) Applicants for organized, fee-paying (part-time) doctoral studies and students applying through the Stipendium Hungaricum scholarship program must submit the following documents in addition to those listed in section (2) (a) to (j):

  a) Detailed letter of motivation: a detailed essay on why they chose the program, what their research plans are, and how these fits into their career.
  b) Research plan with feasibility analysis and milestones: A research plan is mandatory for all applicants; however, for part-time students and Stipendium Hungaricum students, the research plan must be expanded to include a feasibility analysis and milestones.
  c) Professional references: A recognized professional from a workplace/institution related to the applicant's current or previous professional work should confirm the applicant's suitability in a letter of recommendation. If the candidate is currently employed, a statement from the place of employment should be added that the workload required by the doctoral program is compatible with the time commitment of the candidate's job responsibilities.

(4) Candidates will be assessed partly on the basis of the application form submitted in accordance with the EDHSz and partly on the basis of an interview. During the interview, an Admission Committee of at least three persons appointed by the DIT will verify the applicant's professional qualifications, research ideas and language skills.

(5) Interviews will take place at a time and place determined by the DIT. The DIT will notify applicants in writing of the date and time of the interview.

(6) Ranking for admission is based on 4 criteria, namely:

   (a) diploma classification,
   (b) language proficiency;
   (c) initial academic activity;
   (d) research design, communication skills.

   The detailed rules for evaluation are set out in Annex 4.

(7) The Admission Committee shall assess the candidates up to 100 points. According to § 20 (2) of the EDHSz, a minimum of 60 points is required for admission to doctoral studies and a minimum of 5 points must be achieved in each of the 4 criteria. Applicants who meet these criteria will be ranked. The ranking of admission is determined by the DIT, taking into account the opinion of the Admission Committee, and on this basis the DIT makes a recommendation to the President of the EDHT for the admission decision.

(8) The admission decision may be:

   (a) admission to a full-time, state-funded, organized training course;
   (b) admission to a full-time, self-financed, organized training course;
   (c) admission to part-time, correspondence courses at your own expense;
   (d) admission for individual preparation;
   (e) refusal of an application.

(9) The decision on admission shall specify the form of training and the marks obtained in the admission procedure.

(10) It is possible to transfer between the different forms of training by applying to the DIT.

Curriculum, work plan

9. §

(1) The Doctoral School shall operate on the basis of a curriculum approved by the EDHT on the basis of a proposal from the DIT. The curriculum shall be annexed to the "Regulations".

(2) The curriculum shall include

   a) the purpose of the training,

b) the credits to be earned and their distribution in terms of study, research, publication, teaching, etc.,

c) the list of subjects and their credit values,

d) the list of teachers.

(3) The doctoral student's work plan shall specify the tasks to be performed by the doctoral student during his/her studies within the framework of the doctoral curriculum. The student's work plan shall be drawn up in the first semester of the structured training with the assistance of the supervisor. The work plan of the doctoral student shall be approved by the DIT on the proposal of the supervisor. The work plan can only be approved if it is in accordance with the Doctoral Credit Regulations [EDHSz, Appendix D2].

(4) The work plan shall include the subjects that the student intends to study in order to fulfil his/her academic obligations. Any subject announced by the DI or, with the support of the subject supervisor, a subject taught in a doctoral program of another doctoral school in a related field may be taken. Subject to the approval of the DIT, the work plan may also include subjects taught in foreign doctoral programs.

(5) The work plan shall contain the subject's data as follows:

a) the name (title) of the subject,

b) the lecturer (the lecturer in charge of the subject, the lecturer who announced the subject),

c) the place of publication (institution, doctoral school or faculty),

d) credit value,

e) the timetable, i.e., the semester in which the course will be taken up.

(6) The work plan shall include the research plan submitted for admission, supplemented in accordance with Annex 3.

The tasks of participants in organized training

10. §

(1) On the basis of the evaluation and minutes of the Admission Committee, the DIT shall make a recommendation to the President of the EDHT, taking into account additional criteria. The decision on the admission shall be taken by the President of the EDHT, who shall issue a decision. [20. § (4) of EDHSz]

(2) The doctoral student shall participate in academic training at the University and shall carry out individual research. The doctoral student may also undertake teaching duties, which shall not, however, form part of the study obligations. At the discretion of the DIT, credits may be obtained for teaching activities [Annex D2) of EDHSz].

(3) Doctoral students participating in organized training must register with the Directorate General of Education before the beginning of the semester, as announced. Documents required for enrolment:

- diploma,
- 1 photo ID,
- one identity document,

- notification of admission,
- completed enrolment form.

After the deadline for enrolment/registration, an extra procedural fee is payable. At the time of enrolment, the Directorate General will open the doctoral student's personal register.

(4) The unit of study requirements is the study point (credit). A credit is a unit of study, teaching and research work aimed at fulfilling the obligations of doctoral students. Doctoral students are required to complete a total of 240 credits during their entire training, in accordance with the conditions set out in point (4) of the ÓE Doctoral Credit Regulations (Annex D2). If the doctoral student, through some fault of his/her own, has not achieved the required number of cumulative credits (Annex D2) by the end of a semester, the DIT will propose the termination of the student's student status on the basis of Annex D4/A) of the EDHSz. The detailed credit regulations of the Doctoral School are set out in Annex 2 of the present "Regulations".

(5) Study (training) credits may be obtained by studying and passing an examination. The number of study (training) credits to be completed during the 8 semesters of doctoral studies shall be a minimum of 34 and a maximum of 60 [Annex D2] of EDHSz]. The completion of the credits shall be certified by the lecturer of the subject listed in the index on the basis of the examination, essay, report, etc. required for the subject taken. Credit may be awarded only for a subject which is graded on a five-point or three-point scale with a merit mark. No credits may be obtained in doctoral studies through the study of languages.

(6) Credit may be awarded for the educational activity performed by the doctoral student in accordance with Annex 2 of the "Regulation".

(7) The doctoral student shall receive credit for publication and other academic activities. Annex 5 of the "Regulation" contains the publication credit table. The credit table shall be reviewed by the DIT at least once every five years. The subject supervisor of the doctoral student may propose to the DIT that the credit table be supplemented or amended.

(8) The doctoral student shall prepare the certificate of academic obligations before the end of the doctoral training period. The summary of studies shall include a list of the tasks/subjects completed and the credits awarded. The "absolutory" is carried out by the President of the EDHT in the case of a positive decision by the DIT.

(9) Every six months, the DIT shall evaluate the research activities of doctoral students, for which it shall seek the opinion of the competent institute directors and the supervisor. The semesterly report of the students in the organized training program shall consist of a written and an oral part. The written part may not be waived. The report must be approved and signed by the subject supervisor.

(10) The semesterly report of the doctoral students participating in the organized training shall take the form of a public seminar or conference, which shall be attended by the doctoral students of the DI, their supervisors and a representative of the DIT.

Rules for individual preparation

11. §

(1) The aim of the individual preparation scheme is to enable professionals with a high level of theoretical preparation and professional experience to prepare for and obtain a doctoral degree without having to fulfil organized study obligations. [§ 21 of EDHSz]

(2) The general conditions for individual training are provided for in § 21 of the EDHSZ.

(3) The Doctoral School requires applicants for individual doctoral preparation to meet the following academic and professional entry criteria:
   a. the applicant must already have publications worth of 50 credits (out of the 75 publication credits required for the doctorate)
b. at least two years of certified professional experience in the field of research, corresponding to the duration of the training and research phase.

(4) In the case of individual preparation, the student status is established upon the completion of the comprehensive (or complex) examination. At the same time, the Doctoral School accepts the 120 credits of the training and research phase as completed. Taking into account the 50 publication credits defined as an entry requirement, the individual preparatory student is obliged to acquire an additional 70 credits during the research and dissertation phase, which can be fulfilled through active participation in research projects, teaching, and the publication of scientific journal articles and conference papers (for detailed regulations see Annex 2: Credit Rules).

(5) A participant in an individual training program shall apply for a degree within three years. Failure to do so shall result in the removal from the individual training course.

(4) Where the EDHSz and the present "Regulations" do not make specific provisions for doctoral candidates in individual training, the provisions applicable to participants in structured training shall apply.

Change of supervisor

12. §

(1) In justified cases, the doctoral topic or the (co-)supervisor may be changed by the Council of the Doctoral School upon request of the doctoral student concerned or at its own discretion. The DIT shall seek the opinion of the old and the new supervisor(s) before taking a decision.

(2) A change of subject or supervisor does not extend the duration of the period of study.

IV. Doctoral degree

13. §

(1) The procedure for obtaining a doctoral degree is laid down in § 22 of the EDHSz.

(2) The general conditions for obtaining a doctoral degree are laid down in § 23 of the EDHSz, the detailed regulations in Articles 24 to 35 of the EDHSZ.

(3) The complex examination is regulated in § 24-26 of the EDHSZ.

The doctoral thesis

14. §

(1) The general rules for doctoral theses are laid down in § 27 of the EDHSz.

(2) The name of the author and the supervisor(s), the name of the doctoral school, the place and date of writing shall be indicated in the thesis. The thesis must include a table of contents, an abstract in Hungarian and in foreign languages (maximum 2 pages) and a bibliography. The latter should also include the candidate's scientific publications. The thesis may be accompanied by an appendix (e.g., a collection of photographs, documents, program description, etc.).

(3) The thesis shall be accompanied by a thesis booklet prepared in accordance with Annexes D9) to D10) of the EDHSz.

(4) 3 copies of the thesis and 10 copies of the thesis booklet must be submitted in hard copy and one electronic version.

(5) At the beginning of the thesis, a statement must be made that the results are the author's own and that the results of others have been used with proper citation.

The workshop debate

15. §

(1) The thesis shall be submitted for discussion at the workplace in the competent educational or organizational unit before submission.

(2) The workplace debate shall be organized by the head of the competent department at the initiative of the head of the DI.

(3) Three copies of the thesis to be submitted for the workshop must be delivered to the DI office at least three weeks before the workshop.

(4) You must invite to the workshop:

    a. all teachers, researchers and doctoral students of the institute in which the candidate has carried out his/her research
    b. the members of the DIT and the core members
    c. the supervisor(s)

(5) Invitations to the workshop shall be sent out by the head of the department responsible for the debate at least two weeks in advance and published on the DI website.

(6) For the debate, two written evaluation reports of the thesis are prepared. The author will consider any comments at his/her discretion. Minutes and a record of attendance shall be kept of the evaluation reports, the discussion at the workplace and the author's position.

The public debate

16. §

(1) The rules on public debate are laid down in Articles 29 and 31 of the EDHSz. The script of the public debate shall be drawn up in accordance with Annex D15) to the EDHSz.

(2) The public debate shall be organized by the Doctoral School.

(3) Invitations to the public debate shall be sent out by the school at least three weeks before the meeting.

(4) The invitation to the public debate shall also be published on the website of the National Doctoral Council - www.doktori.hu - and on the DI website. The invitation shall indicate where the thesis can be viewed by interested parties.

(5) To the public debate must be invited:

    a. the members of the DIT,
    b. all qualified instructors of the doctoral institute,
    c. the relevant departments of the co-faculties,
    d. the supervisors.

(6) If the thesis is related to national security or involves delayed disclosure (protection of intellectual property, patenting, etc.), it is necessary to ensure appropriate confidentiality throughout the public debate, both for the parties involved and for all participants in the proceedings. This should be documented by appropriate declarations.

Language requirements

17. §

(7) Proof of intermediate level (B2) of English.

V. Other provisions

Quality assurance

18. §

1. The DIT shall develop principles and methods for quality assurance of doctoral training and degree acquisition in computer science and mathematics and publish them on its website and on the ODT website in its "*Quality Assurance Plan*".

2. Internal quality assurance tools:

   a) Verification of credit points to be earned by students.
   b) Continuous monitoring of publication performance.
   c) Preparation of a work plan approved each year by the supervisors, which includes the objectives of individual research work.
   d) Supervision of the student's mid-term report on his/her professional work for the period.
   e) Regular public presentation and discussion of the students' scientific achievements.
   f) Presentation and discussion of the completed dissertation in a workplace discussion prior to submission, which may be initiated by the supervisor.

3. The DIT will continuously monitor the functioning of the education program. In its work, it draws on the opinions of doctoral candidates and recent graduates and consults external experts when necessary.

4. The DIT will evaluate the functioning and experience of doctoral education on an annual basis.

More details can be found in the "Quality Assurance Plan".

Annexes to the "Regulations" of the Doctoral School

19. §

1. Evaluation of scientific publication activity
2. Credit rules
3. Research design
4. Admission scoring
5. Council of Core Members
6. The Council of the Doctoral School and its officers
7. The Admission Committee
8. The International Advisory Board of the Doctoral School
9. Quality Assurance Plan

Annexes VI

Annex 1: Evaluation of scientific publication activity

1. A publication is a printed and/or electronic communication (journal article, scientific monograph, book chapter, etc.) which [according to Annex 3 of Decision No. MAB 2013/6/III/1.3]:

    a. presents the results of the author's own research (in the case of a book, such results are also referred to in detail),
    b. includes precise references to the literature,
    c. it must bear an ISBN or ISSN number,
    d. has been published in a peer-reviewed journal or as a journal publication.

2. Does not qualify as a publication:

    a. an article published in a daily or non-professional weekly journal (even if the subject matter is of a professional nature),
    b. a self-published work (if it is neither linguistically nor professionally proofread)
    c. university notes, teaching aids, handouts, example books, compilations, editing, proofreading, etc.
    d. short (one-page) papers, abstracts and extended abstracts in conference publications,
    e. (book) translation,
    f. review (book review) or critique (except for longer literary analysis),
    g. a research report prepared in response to a call for proposals or a commission,
    h. thesis, dissertation,
    i. other manuscript-type theses, dissertations, or writings,
    j. scientific writing (e.g. in Life and Science)
    k. non-research interviews (neither as a reporter nor as an interviewee)

3. Publications in foreign languages are publications in the working language.

4. In the degree award procedure, the DIT checks the minimum requirements set by the EDHSz at two points:

    - at the start of the procedure,
    - at the time of submission of the thesis.

    (If the launching of the procedure and the submission of the thesis coincide, the committee will examine the fulfilment of both requirements together.)

    The minimum requirements and the scoring of publications are a yardstick for candidates to assess their publication record and when they can initiate a doctoral procedure; they also provide an indicative threshold below which they cannot normally propose to initiate a doctoral procedure. However, it should be noted that the quality of publications is as important as the quantity of publications in the decision to award a degree.

Compliance with the minimum requirements is checked by the proposer (and, on the basis of the proposal, by the DIT) on the basis of the list of publications submitted. If the minimum requirements are not met, the application will be rejected by the DIT.

Minimum publication requirements for the start of the award procedure

- - At least 5 publications published or in the process of publication as evidenced by an editorial or publisher's statement, of which
  - at least 2 articles published or accepted for publication in internationally recognized peer-reviewed journals in the field. At least one of the two peer-reviewed journal articles must be published in a journal listed in the Web of Science, Scopus or Thomson Reuters database.
  - at least 3 publications in a foreign language with at least 50% of the candidate's average authorship (in the authorship the supervisors are not counted),
  - at least 3 peer-reviewed publications.
- - minimum overall score to be achieved: 75.

Scoring of publications

When assessing the publication activity, only the data published in the Hungarian Archives of Scientific Works (MTMT) can be taken into account in accordance with the following:

Scientific article (the score is divided by the number of authors who are not the supervisor(s) of the author)

Number of peer-reviewed journal articles
    With IF: 36 credits
    Without IF, published abroad 24 credits
    Without IF, published at home18 credits

Proofread conference article (min 4 pages) in a publication with ISBN or DOI number, in print or electronic format
    in a foreign language 24 credits
    in Hungarian 6 credits

Scientific book or part of a book (score with the number of non-leading authors
20 per full page
    in foreign languages 3.6 credits
    in Hungarian 1.8 credits

Publication credits will be applied in ascending order from 1 September 2016. Previous publication credits will be counted according to the rules adopted on 23 March 2016.

PhD minimum requirements for the submission of a thesis

For each thesis point of the dissertation, it is necessary to indicate where the candidate has published the results. In the case of co-authored publications, co-authors (with the exception of the supervisors(s) and the foreign co-authors) must provide a "Co-author Waiver" as per Annex 7 of the EDHSZ.

- At least two of the scientific publications linked to the Thesis must have been published or accepted for publication in an internationally recognized peer-reviewed journal in a foreign language. At least one of the two peer-reviewed journal articles must be published in a journal listed in the Web of Science, Scopus or Thomson Reuters database.

- At least half of the thesis points must be accompanied by an article published in a journal or peer-reviewed conference publication.

Annex 2: Credit rules

(1) All study requirements in doctoral (PhD) training shall be defined in credits (study points).The general rules on the credits to be acquired in doctoral training are set out in Annex 2 to the EDHSz.

(2) During the eight semesters of doctoral studies, a total of 240 credits must be accumulated in order to obtain the final PhD diploma. Credits may be earned in the following activities:

- studies, i.e., the completion of courses;
- research activities;
- teaching activities.

The number of credits that can be obtained and the minimum number of credits to be obtained are summarized in the table below.

Type of credit		Number of credits available	Minimum number of credits to be earned	Maximum number of credits to be earned
Study credits		7 per core subject	28	60
		6 per soft skill subject	6	
Research credits	Semesterly research report	Semesters 1-4: 8, Semesters 5-8: 15	32 60	92
	Active participation in research projects	6-10 per project		
	Journal and conference publication	According to Regulations Annex 1 According to Regulations Annex 2	75	
Education credits		1 contact hour per week: 2		60
Total			**240**	

(3) 7 credits per core professional subject and 6 credits per soft skill subject are awarded by course completion. The minimum number of study credits to be obtained is 28 from core professional subjects (with a minimum of 4 professional subjects) and 6 credits from soft skill subjects (with a minimum of 1 soft skill subject). A minimum of 34 study credits is required.

(4) 2 credits may be earned for teaching 1 class per week for a semester. The doctoral student shall be awarded a maximum of 5 teaching credits per semester for the first four semesters of the course and a maximum of 10 credits per semester for the fifth to eighth semesters of the course. [Cf. EDHSz, Appendix 2, Annex 1.3.]

(5) There are three ways to earn credit for research activity:

     a) For publication activity, publication credit is awarded according to Annex 1 of the MSZ.
     b) 8-8 credits for the research report per semester in semesters 1 to 4 and 15-15 credits in semesters 5 to 8.
     c) For active participation in a research project, 6-10 credits per project may be awarded on the basis of a written proposal from the project leader.

For the crediting of activities carried out at other doctoral schools or institutions (credit transfer, partial training, transfer, teaching, research), the DI applies the rules and regulations set out in the chapter "*D2) Doctoral Credit Regulations I. Forms and extent of student performance at the university*" of the EDHSz.

Annex 3: Research design structure

The research design should follow the structure set out below:

I. Background to the research
Description of the research topic; brief review of the literature; links with previous research on the topic. Length: 1-3 pages.

II. Objectives
Description of the research problem to be solved, its significance and relevance within the discipline. Length: ½ -1 ½ pages.

III. Test methods
Description of the procedures, techniques and methods to be used. Length: ½ to 2 pages.

IV. Research timetable
Description of the planned research milestones, planned progress by semester.

V. Possibility of exploiting the results
Demonstrate the practical applications of new scientific results.

VI. List of bibliographical references
Literature references used, published by foreign authors, by [name, year].

VII. Planned study visits
Planned participation in conferences, summer universities, other academic events abroad and in the country. Ideas for funding study visits, proposals for grants.

VIII. Scientific publications, papers

Own publications already published, preprints and manuscripts not yet accepted for publication related to the research project.

Annex 4: Admission scoring

Applicants will be interviewed by an Admission Committee (chair, members) appointed by the DIT, either in person or online. On the basis of the documents submitted and the interview, the committee will assess the performance of the candidates on a 100-point scale according to the following criteria.

1. Diploma qualification: (MSc/MBA diploma) qualification - maximum 30 points (excellent diploma 30, good diploma 20, medium 10 points);

2. Language proficiency: maximum 15 points (upper 15, intermediate 11, basic 7, oral assessment 0-7);

3. Initial scientific activity: maximum 30 points

   Points are calculated on the basis of the publication point system also applied to doctoral students [Annex 1].

Additional points may be awarded for TDK participation and placement:

   TDK 1st place: up to 20 points
   TDK 2nd place: up to 15 points
   TDK III: up to 10 points
   TDK participation: up to 5 points

In order to receive points for initial academic activity, the publications in question and the diplomas certifying the TDK places must be presented by the end of the admission period. The maximum number of points is 20.

Pro Scientia medal holders will receive a maximum score for evaluation criterion 3.

4. Research plan, professional habit: maximum 25 points

On the basis of the research plan submitted by the candidate and the interview, the committee will assess the ideas for the doctoral thesis and the feasibility of the research program, with particular attention to the following aspects

- Can you formulate the problems that other researchers have not solved for the chosen research topic?
- Does he/she know what literature sources can be used to prepare the chosen topic?
- Can you separate the research and development tasks related to the topic?

Annex 5: Core Members of the Doctoral School (TT)

   Árpád Baricz, professor, Dr. habil., PhD
   Péter Galambos, professor, Dr. habil., PhD
   Tamás Haidegger, professor, Dr. habil., PhD
   László Horváth, professor emeritus, Dr. habil., CSc
   Levente Kovács, professor, Dr. habil., PhD
   Miklós Kozlovszky, professor, Dr. habil., PhD

Sándor Kristály, professor, Dr. habil., DSc
Péter Tibor Nagy, professor emeritus, Dr. habil, DSc
Tibor Pogány, professor, PhD
Simon Gyula, professor, Dr. habil., DSc
Sándor Szénási, professor, Dr. habil., PhD
József Tar, professor, Dr. habil., DSc
Annamária Várkonyiné Kóczy, professor, Dr. habil., DSc

Annex 6: Council and Officers of the Doctoral School

Chairman: Gyula Simon, professor, DSc
Vice-Chairman: Johanna Sájevicsné Sápi, associate professor, Dr. habil., PhD

Members:

József Abaffy, professor emeritus, DSc
Aurél Galántai, professor Emeritus, DSc
László Horváth, professor emeritus, CSc (Director of Operations)
Levente Kovács, professor, PhD
Miklós Kozlovszky, professor, PhD
Péter Nagy, professor emeritus, DSc
Imre Rudas, professor, DSc
László Szeidl, professor emeritus, DSc
Lehel Dénes-Fazakas, member with consultative rights, student representative

External members:

Dr. János Csirik professor (SZTE), DSc
Dr. János Abonyi, professor (PE), DSc
Dr. Róbert Fullér, professor (SZE), DSc

Program and Sub-Program Directors:
Director of the Applied Informatics Program: Imre Rudas, professor, DSc
Director of the Foundations and Applications of Informatics Sub-Program:
Annamária Várkonyiné Kóczy, professor, Dr. habil., DSc
Director of the Cyber-Medical Systems Sub-Program:
Levente Kovács, professor, PhD
Director of the Cyber-Physical Systems Sub-Program:
József Tar, professor, Dr. habil., DSc
Director of the Engineering Calculations and Models Sub-Program
Imre Rudas, professor, DSc
Director of the Applied Mathematics Program: Aurél Galántai, professor Emeritus, DSc
Director of the Mathematical Foundations and Applications Sub-Program
Aurél Galántai, professor Emeritus, DSc
Director of the Engineering Calculations and Models Sub-Program
Imre Rudas, professor, DSc

Annex 7: The Admission Committee

President: professor emeritus László Horváth

Members:
      Dr. Árpád Baricz professor
      Dr. Péter Galambos professor
      Dr. Péter Nagy professor Emeritus
      Dr. Zsombor Zrubka associate professor

Annex 8: International Advisory Board of the Doctoral School

- Oussama Khatib, Professor, PhD, Stanford University, USA, Doctor Honoris Causa of Obuda University
- Hamido Fujita, Professor, Iwate Prefectural University, Japan, Doctor Honoris Causa of Obuda University
- Keith Hipel, Professor, University of Waterloo, President-Elect Academy of Science Royal Society of Canada, Canada, Doctor Honoris Causa of Obuda University
- Fumio Harashima, Professor, President of Tokyo Metropolitan University, Japan, Honorary Citizen of Obuda University

Annex 9: Quality Assurance Plan

In preparation for the new ESG-based accreditation system for the DI, the Councils of the *Doctoral School of Applied Informatics and Applied Mathematics*, *Materials Science and Technology,* and *Security Sciences* has developed a joint "*Quality Assurance Plan*", the core material of which is the same for all of them, and the specific features of each of them are reflected in their annexes. This common core document is attached separately, together with the specific annexes for AIAMDI.