ANTAL KERPELY DOCTORAL SCHOOL OF MATERIALS SCIENCE AND TECHNOLOGY OPERATING RULES

1.1.29. Regulation

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Contents

Chapter I

Purpose of the Rules

1. §

(1) (1) The purpose of this regulation (hereinafter referred to as the "Regulation") is to define the procedural and organizational rules of the doctoral training conducted at the Kerpely Antal Doctoral School of Materials Sciences and Technologies operating within the Faculty of Materials and Chemical Engineering, in accordance with the Regulations on Doctoral Training and the Awarding of the Doctoral (PhD) Degree of the University of Miskolc.

Legislation applicable to the Rules and the scope of the Rules

2. §

(1) The fundamental legal regulations and other binding documents covering the areas defined as the purpose of this Regulation are as follows:
a) Act CCIV of 2011 on National Higher Education
b) Act C of 2001 on the Recognition of Foreign Certificates and Diplomas
c) Government Decree No. 87/2015 (IV.9.) on the Implementation of Certain Provisions of Act CCIV of 2011 on National Higher Education
d) Government Decree No. 423/2012 (XII.29.) on the Admission Procedures to Higher Education
e) Government Decree No. 387/2012 (XII.19.) on Doctoral Schools, Doctoral Procedures, and Habilitation
f) Government Decree No. 51/2007 (III.26.) on the Benefits for Students Participating in Higher Education and the Fees Payable by Them
g) Government Decree No. 137/2008 (V.16.) on State-Recognized Foreign Language Examinations and the Recognition in Hungary of Certificates Attesting Foreign Language Proficiency Issued Abroad
h) The self-assessment criteria and procedural rules of the Hungarian Accreditation Committee (MAB)

(2) The personal scope of this Regulation extends to all organizational units, employees, and students of the University of Miskolc.

(3) he temporal scope of this Regulation: from the date of its entry into force until its withdrawal

Chapter II

General provisions

The establishment of the Doctoral School
3. §

The Antal Kerpely Doctoral School of Materials Sciences and Technologies was accredited by the Hungarian Accreditation Committee (HAC/MAB) on the basis of Decision No. 2000/10/III/2.4/1, adopted at its meeting on 15th December, 2000, building upon the Metallurgy Doctoral Program accredited in 1994 at the Faculty of Materials and Metallurgical Engineering of the University of Miskolc.

According to Decision No. 2015/6/XI/12/2/885 of the HAC, the Doctoral School—classified under "Materials Sciences and Technologies" with identification number 33 at the University of Miskolc—received a "compliant" qualification. The HAC extended the accreditation of the Doctoral School until 31st July, 2019, and subsequently, by Decision No. 2019/6/IX/7/2/1303, until 28th June, 2024.

This Doctoral School, like all others, was established in accordance with Act LXXX of 1993 on Higher Education (as amended), Government Decree No. 51/2001 (IV.3.) on Doctoral Training and the Awarding of the Doctoral Degree, and the relevant resolutions of the HAC.

The operation of the Doctoral School is governed by Act CCIV of 2011 on National Higher Education, Government Decree No. 387/2012 (XII.19.) on Doctoral Schools, Doctoral Procedures, and Habilitation, as well as the "Regulations on Doctoral Training and the Awarding of the Doctoral (PhD) Degree."

The Operational Regulations of the Antal Kerpely Doctoral School of Materials Sciences and Technologies, based on the above-mentioned legal framework, set out the specific principles and procedures governing its operation.

Organization, name, and details of the Doctoral School
4. §

The Antal Kerpely Doctoral School of Materials Sciences and Technologies operates within the Faculty of Materials and Chemical Engineering of the University of Miskolc.The contact details of the Doctoral School are provided in Annex 1.

Head of the Doctoral School
5. §

The general representation of the Doctoral School is carried out by the Head of the Doctoral School, who the University Doctoral Council elects from among the core members who are university professors of the Doctoral School, based on the recommendation of the majority of the core members, and is appointed and dismissed by the Rector for a term of up to five years. The appointment may be renewed multiple times. An official letter of appointment is issued for the position. The Head of the Doctoral School is a university professor who is a core member with recognized international standing and is responsible for the scientific quality and educational activities of the School..

Members of the Doctoral School
6. §

(1) The members of the Doctoral School are lecturers, researchers, and professors emeriti holding academic degrees who, upon the recommendation of the Head of the Doctoral School, are deemed suitable by the Scientific Doctoral Council of the discipline to perform educational, research, and supervisory tasks within the framework of the Doctoral School (core members, course supervisors, topic proposers, supervisors, and co-supervisors). New core members of the Doctoral School are proposed to the University Doctoral Council by the meeting of current core members. The list of current core members is included in Annex 2.

(2) The professional criteria regarding doctoral research topics, topic proposers, and supervisors are defined in Annex 3 of the University Doctoral Regulations and Annex 5 of this Regulation.

(3) When authorizing the announcement of a research topic, the Scientific Doctoral Council reviews whether the proposer has publications that could be accepted as meeting the dissertation defense requirements in a doctoral candidate's degree procedure. If not, the Council does not support the person's role as a supervisor.

(4) The Scientific Doctoral Council insists that every full-time scholarship student must have at least one responsible supervisor who is a lecturer or researcher of the University of Miskolc and is officially affiliated with one of its departments or institutes..

The Scientific Doctoral Council of the Discipline
7. §

(1) The Chair, Deputy Chair, and members of the Scientific Doctoral Council of the discipline are nominated by the core members of the Doctoral School. The Faculty Council provides its opinion on the proposed Chair and Deputy Chair. The Chair, Deputy Chair, and members of the Scientific Doctoral Council are appointed and dismissed by the Chair of the University Doctoral Council following the consultative vote of the University Doctoral Council.

(2) The Scientific Doctoral Council shall consist of at least seven members. With the exception of the doctoral student member, all members of the Council must hold a doctoral (PhD) degree or an equivalent academic qualification. Apart from the doctoral student representative, only individuals who meet the criteria for core membership may serve as voting members. Professional representation from partner institutions must also be ensured in programs organized jointly with other universities.

(3) The Scientific Doctoral Council includes one representative elected by the doctoral students participating in doctoral training within the given discipline. The student representative participates in the meetings of the Council with voting rights. The representative's mandate is valid for one academic year.

(4) At least one-third of the members of the Scientific Doctoral Council must be individuals who do not have an employment relationship with the University and who hold a doctoral (PhD) degree or an equivalent academic qualification. A Professor Emeritus of the University is considered to have an employment relationship with the University.

(5) The Chair of the Scientific Doctoral Council must be a university professor, preferably the Head of the Doctoral School.

(6) The term of office of the Chair and the members of the Scientific Doctoral Council—except for the member mentioned in paragraph (3)—is three years. The Chair and members may be reappointed.

(7) The work of the Scientific Doctoral Council is supported—on behalf of the Council—by the Secretary of the Doctoral School and the Doctoral Study Committee. The Committee includes the doctoral student representative delegated to the Council, the administrators of the Dean's Office responsible for doctoral student affairs and for doctoral candidate matters, and the Secretary of the Doctoral School (with consultative rights). The Committee is chaired by a lecturer holding a PhD or equivalent degree, elected by the Scientific Doctoral Council and nominated by the Head of the Doctoral School. The responsibilities of the Doctoral Study Committee include assessing and recording the performance of doctoral students, reviewing their requests, managing their administrative matters, and assisting in the preparation of the meetings of the Scientific Doctoral Council.

(8) Additional provisions regarding the Scientific Doctoral Council (its duties and quorum requirements) are set out in Sections 5 (8)–(9) of the University Doctoral Regulations..

The Doctoral School's registration system and administration
8. §

(1) The administration of the Doctoral School's affairs is the responsibility of the Dean's Office of the Faculty. The core documents and applications are recorded individually for each doctoral student, ensuring they are easily manageable, transparent, and suitable for administrative processing through a personalized, computerized database system.

(2) As part of the records, the authenticated copies of the minutes of the meetings of the Scientific Doctoral Council are also kept in the Dean's Office.

Structure of the Doctoral School
9. §

(1) The Antal Kerpely Doctoral School of Materials Sciences and Technologies covers the following research areas:
a) Chemical Metallurgy
b) Foundry Engineering
c) Interfacial and Nanotechnologies
d) Metal Forming
e) Physical Metallurgy and Heat Treatment
f) Materials Informatics
g) Space Materials Science and Technology
h) High-Temperature Equipment and Thermal Energy Management
i) Ceramics and Their Technologies

j) Polymer Technology
k) Chemical Processes and Technologies

(2) Most members of the Scientific Doctoral Council also serve as heads of one of the above research areas, which automatically ensures proper disciplinary representation within the Council. (The heads of the designated research areas are the faculty members listed in Annex 4 of the Faculty.)

(3) Within the Doctoral School, the educational programs—based on the decisions of the Scientific Doctoral Council—are supervised by the heads of the research areas. Their supervisors directly guide the work of the doctoral students participating in the training.

Chapter III.
The educational work of the Doctoral School

Admissions Committee
10. §

The Admissions Committee is elected annually by the Scientific Doctoral Council. The Committee must consist of at least three members, and a supervisor with an applicant in the given admissions process may not serve as a member.

Proceeding
11. §

(1) Section 1 of Annex 16 of the University Doctoral Regulations summarises the general requirements for doctoral student admission. Further details of the admission procedure specific to the Antal Kerpely Doctoral School are as follows:

a) Alongside the call for applications for the doctoral (PhD) program, the point system used in the admission process and its guidelines must be published on the website of the Doctoral School.

b) The points earned by doctoral applicants, based on the submitted documents, are preliminarily assessed by the Doctoral Study Committee and communicated to the Candidate prior to the oral entrance examination.

c) During the oral entrance examination, the Admissions Committee primarily seeks information about the applicant's research plans, scientific preparation, language skills, suitability, and presentation abilities, aiming to evaluate the expected training and degree completion effectiveness using the most objective criteria possible.

d) The doctoral entrance examination may occur on one day following the final exam. Applicants are notified in advance in writing of the date and location.

e) During the admission procedure, the administrator responsible for doctoral affairs at the Dean's Office receives the admission applications from the doctoral affairs administrator of the Directorate for Science and International Affairs, prepares the admission scoring sheets, organizes the entrance examinations, and the Admissions Committee processes the results and submits a ranking recommendation to the Scientific Doctoral Council.

f) Courses announced for doctoral students may be taken by students completing master's programs concurrently with their final year of study. The courses and the credits awarded for them are listed in this Regulation and the attached course list. Courses may be selected based on the announced list for each semester-by-semester. In the case of successful admission to the PhD program, the credits earned simultaneously in the master's program are recognized at the time of the admission decision.

g) Doctoral students are entitled to participate in joint programs between the University of Miskolc and foreign universities, in accordance with the conditions set out in the inter-institutional cooperation agreements..

Post-admission actions
12. §

(1) Following admission, doctoral students are required to fulfill their registration and enrollment obligations in accordance with Section 37 of Volume III of the University Rules and Regulations (Student Requirements System).

(2) During registration, the Doctoral Study Committee receives, reviews, and, in accordance with the regulations, corrects the submitted data files, including the initial, admission, enrollment, and work plan sheets. After the first registration, the doctoral student is required to submit these semester-end progress sheets continuously at the end of each completed semester. The validity of these semester sheets requires the signature of the student's supervisor. The Study Committee sends the corrected data files to the doctoral student for printing and signature. The Dean's Office stores the signed documents and corrected files.

(3) In the Antal Kerpely Doctoral School, the Scientific Doctoral Council makes the University of Miskolc's Regulations on Doctoral Training and the Awarding of the Doctoral (PhD) Degree, as well as the Operational Regulations of the Antal Kerpely Doctoral School of Materials Sciences and Technologies, continuously available throughout the year on the official website, including all valid amendments.

(4) In the Antal Kerpely Doctoral School, training may be conducted on a scholarship or self-financed basis, and its successful completion is evidenced by the acquisition of the absolutorium in accordance with Section 6(12) of the University Regulations.

Curriculum
13. §

(1) The number of credits to be earned is the same for all forms of training, as summarized in the Doctoral School's training plan. According to this plan, during the first four semesters of the program, the Candidate must complete a total of four examinations and two compulsory, two-credit courses ("Research Methodology" and "Scientific Database Management").

(2) The Scientific Doctoral Council approves the work and research plans at the beginning of the first semester. Any subsequent modifications require the consent of the Council.

(3) The list of courses available from those taught at the Faculty is provided in the course list annexed to the training plan, and the syllabus for each course is continuously available on the Doctoral School's website. Some courses may only be taken in one semester (spring/fall) according to the announced conditions or after consultation with the course instructor.

(4) To supplement or broaden the doctoral training, in addition to the four compulsory courses, the Candidate may also take optional "elective" courses related in some way to the goals set out in their research plan or aimed at improving foreign language proficiency. The Candidate may propose such courses in agreement with their supervisor, subject to approval by the Scientific Doctoral Council. Each elective course is worth 2 credits.

(5) Fulfillment of the prescribed academic requirements is recorded in credits in the doctoral student's electronic transcript and in the central record kept by the Dean's Office.

a) Regardless of the grade, the credits awarded for a successfully completed compulsory course are 10, so the four compulsory courses yield a total of 40 credits.

b) In the first semester (or the second semester in mid-year intake programs), all doctoral students are required to take the "Research Methodology" course, and in the second semester (or the first semester in mid-year intake programs) the "Scientific Database Management" course. Each of these courses carries 2 credits but is not included among the subjects of the comprehensive examination.

c) The rules of the comprehensive examination are specified in Section 9 of the University Regulations and in the "Comprehensive Examination Rules" annexed to the training plan.

d) Language requirements of the Doctoral School:

The Doctoral School accepts English or German as the foreign language necessary for the practice of the discipline. Language proficiency may be demonstrated during the admission process either with a certified copy of a complex language exam at a minimum B2 level or by delivering a 20-minute oral presentation in English or German before the Admissions Committee, demonstrating proficiency necessary for the discipline. For degree completion, language proficiency must be documented either with a certified copy of a complex language exam at a minimum B2 level or by delivering one of the doctoral research seminar presentations in English or German.

(6) The doctoral student may also apply for a study period abroad. Participation is based on a work program proposed by the supervisor and approved by the Scientific Doctoral Council, ensuring the validity of the study period within the approved doctoral training program.

(7) During foreign study periods, the scholarship is provided for a stay of up to six months. For a period between six and twelve months, the Scientific Doctoral Council decides whether the student continues to receive support. Study periods abroad exceeding twelve months cannot be financed by the home institution.

(8) Doctoral students may earn a maximum of 5 research credits for short-term mobility programs (5–60 days) abroad, either by presenting a professional report or by delivering a foreign-language presentation on-site.

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Research seminars
14. §

(1) The Candidate demonstrates progress in their own research topic through research seminars. During the program, a total of at least seven public research seminars must be completed: three during the training and research phase, for which a maximum of 15 credits per seminar may be awarded, and four during the research and dissertation phase, for which a maximum of 20 credits per seminar may be awarded.
(2) The formal requirements for research seminar papers submitted by PhD students of the Doctoral School are as follows:

a) Papers must be submitted in one printed, bound copy to the Dean's Office and one electronic copy (PDF) to the email address specified in the call. Papers will only be accepted and sent for review if they bear the signature(s) of the supervisor(s).
b) The cover page of the paper must indicate the name of the Doctoral School, the research seminar number, and the name of the doctoral student, their supervisor, and their department.
c) Papers must be prepared on A4-sized paper, with a maximum font size of 13 and 1.5 line spacing, with a length of at least 20 and at most 30 pages.
d) Tables and figures must be numbered consecutively and titled. The paper may include a bibliography and appendices. The bibliography is recommended to be formatted as follows:
[serial number] AUTHOR(S): Title, Place of Publication, Year, Page(s)

(3) The written material of the research seminar is assigned for review by the Head of the Doctoral School to a faculty member or researcher experienced in the topic. The review is provided to the student before the presentation. To ensure continuity in tracking research progress, it is preferable that the student's seminar papers are regularly reviewed by the same faculty member.
(4) Successful completion is certified by the minutes of the research seminar organized in the month following the end of each semester.
(5) The research seminars are designed to prepare students for dissertation work and constitute a coherent thematic system. Members of the Scientific Doctoral Council must be invited to the research seminars.
(6) The research seminars are organized by the Secretariat of the Doctoral School.
(7) During the entire duration of the program, a maximum of two research seminars may be made up. Requests for such substitution must be submitted to the Scientific Doctoral Council.

Teaching activities of the doctoral student
15. §

(1) (1) A maximum of 5 credits per semester may be awarded for participation in teaching activities. Teaching activity is verified by printing from NEPTUN the course in which the student's name is listed as an instructor.

Research activities of the doctoral student
16. §

(1) The fundamental task and objective of the doctoral program is to provide scientific training based on a university degree, enabling the doctoral student to conduct independent research. Efforts should be made to successfully complete, within the training period, the research tasks necessary for the preparation of the dissertation. The supervisor and the head of the relevant department are obliged to provide the doctoral student with the necessary conditions and to allow them to focus on the assigned tasks.

(2) To support their preparation, the doctoral student may also be involved in tasks related to ongoing research at the research institution, which is documented by an employment contract. For research activities, 2 credits may be earned during the training and research phase, and 5 credits during the research and dissertation phase.

Publication activity of the doctoral student
17. §

(1) During the program, the doctoral student must gain proficiency in scientific publishing of appropriate format and quality. Their own research results must be published as first author, with the supervisor and other contributors as co-authors, in prestigious domestic and international journals before the successful completion of the procedure. The supervisor is responsible for thoroughly reviewing the manuscripts prepared by the doctoral student and making the necessary corrections.

(2) The doctoral Candidate's independent scientific work is evidenced by publications in peer-reviewed journals or volumes considered reputable in the field, as well as in the proceedings of significant domestic and international conferences, including works accepted for publication. The semesterly report template must be used for evaluation.

(3) n the case of co-authored publications, at the start of the degree procedure, a declaration from the co-author(s) must be attached, stating that the results published in the articles or papers included in the Candidate's thesis are the Candidate's own results.

(4) By the time of the defense, the doctoral student must have at least one published and one accepted-for-publication article in a prestigious journal, in which they are the first author. To prove this, the co-author declaration specified in Section IV, 16(4) of the University Doctoral Regulations must be submitted. At least one of these must appear in a reputable international journal; the other may appear in a prestigious Hungarian-language journal, or alternatively, in a minimum four-page article in international conference proceedings, or a patent application, book, or report related to the dissertation topic, in which the Candidate authored at least one subsection. It is not necessary to wait for the physical (or electronic) publication of the article; proof of acceptance with a DOI-containing editorial letter is sufficient.

(5) For the purpose of (4), a "prestigious international journal article" is defined as a journal article that:

a) at the time of submission, has a minimum Q2 ranking (http://www.scimagojr.com/

b) appears in a publication category typical for original scientific results, such as "paper," "regular paper," "original paper," "article," "short paper," etc., excluding other categories such as "review," "discussion," "correspondence," "editorial," "book review," etc.

(6) For publication activity, based on photocopies or separately printed articles and conference programs submitted to the Doctoral Study Committee, the following credits may be awarded:

- International peer-reviewed journal article:
  - Q1 journal: 40 credits
  - Q2 journal: 30 credits
  - Q3 journal: 20 credits
  - Q4 journal: 10 credits

  The Study Committee accepts Q1–Q4 categories from Scimago, taking the highest ranking available for the journal in the year of publication, or if higher, in the year of submission as indicated in the published article.)
- International peer-reviewed journal article without Q ranking: 6 credits
- Foreign-language article in a Hungarian journal: 6 credits
- Article in a Hungarian journal: 4 credits
- Foreign-language article presented at an international conference: 5 credits; presentation delivered: 4 credits
- Foreign-language article at a Hungarian conference: 3 credits; presentation: 2 credits
- Hungarian-language article at a Hungarian conference: 2 credits; presentation: 2 credits

Only peer-reviewed articles publicly available in print or electronic form are considered. Credit is awarded only to first authors in all categories. A minimum of 55 credits must be earned from publications over the four-year training period. For co-authorship, 2 credits per semester may be awarded for research collaboration, up to a maximum of two times.

(7) An article must be at least four pages in print, with standard structure—introduction, experiments, results, conclusions, bibliography. This requirement does not apply to Q1 and Q2 journal articles.

(8) The Doctoral School:

- does not differentiate between oral and poster presentations; both receive credit for "delivered presentation,"
- registered patent: 10 credits
- submitted patent: 4 credits
- recognizes an international conference where the majority of participants are foreign and the presentation language is English, German, or Russian, but not Hungarian. MicroCad and Tavaszi Szél Conferences are considered international only if this condition is met and certified by the organizers.

(9) (At the Antal Kerpely Doctoral School, it is expected that within the minimum 90 credits to be earned before the comprehensive examination, the doctoral student reports on their own research results in publications (articles and presentations) worth at least 10 credits, demonstrating preparedness for research work.

(10) In the doctoral degree procedure and in the evaluation of scientific publication activity, only data appearing in the MTMT database are considered. Publication activity must be documented with data from MTMT. Scientific works not listed in MTMT cannot be considered in evaluating the student's scientific publication activity.

The Doctoral Dissertation

18§

(1) The doctoral dissertation is a comprehensive work presenting the Candidate's objectives and new scientific results – or, in other words, "theses" – (a description of the Candidate's professional work, knowledge of the relevant literature, and research or creative methods). It shall be written in Hungarian or in a foreign language approved by the Scientific Discipline Doctoral Council.

(2) The dissertation must indicate the name of the author and the supervisor, the name of the Doctoral School and its head, the place and date of preparation, and the DOI identifier. The dissertation shall be accompanied by the supervisor's recommendation (not exceeding 3 pages), which must also cover the Candidate's publication performance, as well as a table of contents, theses, and a bibliography that includes the Candidate's scientific publications. Furthermore, a summary in Hungarian and in one foreign language (maximum 2 pages per language) must also be attached. An appendix (e.g. a collection of photographs, documents, etc.) may also accompany the dissertation.

(3) The dissertation to be defended must be submitted in five bound copies and in electronic form. Other relevant provisions are included in Section 19 § of the University Doctoral Regulations.

(4) The Candidate must also attach a booklet of theses to the dissertation, both electronically and in 10 printed copies.

The booklet of these shall include:

a) In Part I: a brief summary of the research objectives;

b) In Part II: a concise description of the investigations and experiments carried out, methods of data collection, and the exploration and use of sources;

c) In Part III: a short summary of the scientific results, their application, or potential for application. Utilization may include: the direct or indirect practical application of the results, promotion of the internal development of the scientific discipline, or contribution to other disciplines through new knowledge.

d) In Part IV: a list of publications produced on the subject of the dissertation.

(5) The Candidate Before the scientific workshop discussion (internal defense), the dissertation shall be sent for preliminary review to two referees – one internal (employed by the University of Miskolc) and one external (not employed by the University of Miskolc), or to two external referees, according to the following procedure:

a) The Scientific Discipline Doctoral Council shall appoint the review committee and the preliminary reviewers after consultation with the supervisor.
b) The preliminary reviewers shall present their opinions at the workshop discussion (internal defense).
c) One of the preliminary reviewers may also serve as one of the official reviewers later.

The workshop discussion may be organized only after the two positive preliminary reviews have been received by the administrative officer responsible for doctoral candidates of the Doctoral School.
The earliest possible date for the workshop discussion shall be the 14th day after the arrival of the second positive review.

(6) In terms of publications, presentations, and creative works, the Candidate may publish jointly with their supervisor by mutual agreement; however, the dissertation, together with its theses, must be submitted for a workshop discussion (internal defense) organized by the academically competent educational unit before submission.
If the Candidate's doctoral research site was only partially or not at all the competent educational unit, the professional and scientific community of the actual research site must also be invited to the workshop discussion, or the discussion may alternatively be organized at that research site with the participation of the Faculty's lecturers.

(7) The rules governing the scientific workshop discussion are contained in Section 18 of the University Doctoral Regulations.

(8) The Candidate defends the theses, not the dissertation itself.
The dissertation must be written in such a way that its main text substantiates the acceptability of the theses formulated at the end.
This requirement is based on the following three criteria:
a) The thesis must belong to one of the research fields covered by the Doctoral School (see Annex 4). If none of the theses meet this condition, the dissertation must be rejected, and it shall be recommended that the Candidate submit it to another Doctoral School.
b) The thesis must contain new scientific results supported by the processed literature.
c) The results formulated in the thesis must be credible, and this must be demonstrated in the dissertation through the detailed presentation of measurements or calculations and by comparing the results with data from the literature.

(9) Each thesis must be evaluated against the three criteria specified in Paragraph 8. If any of these criteria are not met for a particular thesis, that thesis must be rejected by the reviewer and the defense committee.
The defense is considered successful if the Candidate successfully defends at least one thesis.
The evaluation of the defense is not determined by the number of accepted theses, but by the Candidate's overall professional performance as presented in the dissertation, the booklet of theses, and the public defense.

(10) A thesis may be accepted or rejected, in whole or in part, by the reviewer and the defense committee.The reviewer and the committee may not formulate new theses.

The Training and Research Phase, and the Research and Dissertation Phase
19§

(1) The calculation of credit points shall be carried out continuously by the Doctoral Study Committee, based on the regular progress reports of the doctoral students, and recorded on their personal data sheets.
If, by the end of the training and research phase, the doctoral student has accumulated at least 90 credit points, and has fully met all the requirements prescribed during the program, they may apply for the comprehensive examination in accordance with the provisions of Section 12 of the University Regulations and the "Comprehensive Examination Procedures" included in the annex of the training plan.
The research and dissertation phase may be commenced by a doctoral student who has successfully passed the comprehensive examination, has completed four semesters, and has accumulated at least 120 credit points, including all required study credits, during the first four semesters.

(2) During the second, four-semester research and dissertation phase, the doctoral student primarily carries out research activities, publishes their research results, and prepares their dissertation suitable for the scientific workshop discussion.
The rules for semester reporting and assessment are identical to those specified for the training and research phase.

Submission of the Doctoral Dissertation
20§

(1) The conditions for the submission of the dissertation and for the initiation of the degree-awarding procedure are contained in Section 19 of the University Doctoral Regulations.
(2) The head of the Doctoral School shall send the dissertation and the requests for review to the appointed reviewers.
The two official reviewers must prepare written reviews within two months.
(3) If both reviews are positive, the head of the Doctoral School shall approve the scheduling of the public defense within two months of the start of the academic period following the submission.

In other cases:
a) If one review is positive and one is negative, the head of the Doctoral School shall send the dissertation to the previously designated third (reserve) reviewer.
b) If both reviews are negative, a new procedure may be initiated no sooner than two years later, and only once on the same topic.

(4) The defense shall be organized by the Doctoral School, with the participation of the supervisor.
The Scientific Discipline Doctoral Council shall discuss the result of the defense and shall recommend or not recommend the awarding of the PhD degree.

Chapter IV
Financial Management of the Doctoral Schoo
21§

(1) In the doctoral training program, major sources of income include the normative state support granted for state scholarship holders, as well as the tuition fees paid by self-financing students.
If the Doctoral School receives funding from these sources, the Scientific Discipline Doctoral Council shall decide on its allocation.
This funding may be used for the professional development of PhD students and for the operation of the Doctoral School.

The financial resources of the Doctoral School may primarily be used for the following purposes:

- supporting the administrative activities of the Doctoral School;
- payment of honoraria for external reviewers (review fees);
- supporting student participation in conferences, once before and once after the comprehensive examination;
- limited funding for the procurement of materials necessary for experiments.

All financial resources must be accounted for within the same fiscal year.

Chapter V
The Quality Assurance System of the Doctoral School
22§

(1) The quality assurance of doctoral activities is multi-faceted and is discussed in detail in Chapter III, Section 12 of the University Doctoral Regulations.
The Scientific Discipline Doctoral Council regularly monitors the implementation of these principles based on the report of the Doctoral Study Committee.
The quality of the awarded PhD degree is ensured by the Quality Assurance Plan included in Annex 5.

Chapter VI
Maintaining Relations with the University's Doctoral Graduates
Section 23§

The Kerpely Antal Doctoral School of Materials Science and Technology is built upon the undergraduate and graduate programs of the Faculty of Materials and Chemical Engineering of the University of Miskolc.
The Faculty maintains close relations with its engineering graduates through established meeting practices — and even closer ties with those who have obtained a PhD degree.

In maintaining these relations, a particularly important role is played by the former doctoral supervisors and by those members of the Doctoral School who were in any way involved with the doctoral Candidate during their studies.
This relationship has a twofold purpose: to engage PhD graduates, beyond their postdoctoral activities, in supporting the Doctoral School's educational and research programs; and to encourage those who pursued their studies in the Doctoral School before 2016 and who, having obtained their absolutorium, are still working on their dissertation, to continue their academic activities and complete their work.

Chapter VII
Special Rules for Foreign Doctoral Students and PhD Candidates
24§

(1) Foreign doctoral students: the application deadlines are as follows:
- For self-financed programs, Stipendium Hungaricum (SH), Stipendium Programme for Christian Young People (SCYP), or Diaspora scholarship-supported programs: 15th January each year.
- For self-financed programs and individual training: 15th April and 15th October each year.

(2) General requirements for admission to the doctoral program:
a) A university degree completed with a successful final exam / state exam, with a minimum grade of "cum laude" (or its percentage equivalent), or a master's degree certificate;
b) A valid document certifying English language proficiency at minimum B2 level in a comprehensive exam, with an authenticated copy;
c) Adequate professional knowledge in the chosen field, to be verified by the Admission Committee during the interview;
d) Preference is given to candidates with demonstrable prior scientific/professional achievements (e.g., publications, partial studies abroad, or similar activities).

(3) Applications must be submitted during the announced period using the application form available on the Doctoral School's website.
Applications outside the announced period may be considered individually at the discretion of the University Doctoral Council.

Required attachments for the application:
a) Request for recognition of foreign academic qualifications;

b) Higher education diploma and authenticated copies of documents proving the duration and successful completion of studies, together with authenticated translations;
c) Professional CV with photo;
d) Copy of language proficiency certificate;
e) Copies of publications;
f) Description of the Candidate's doctoral research proposal;
g) Proof of participation in the scholarship program (if applicable);
h) Statement from the Doctoral School supervisor confirming acceptance of supervising the foreign doctoral student;
i) Other relevant documents.

(4) The staff member responsible for foreign students at the Doctoral School collects the applications and submits them to the Chair of the Scientific Discipline Doctoral Council.
(5) The Chairman of the Scientific Discipline Doctoral Council appoints and requests the Chairman and members of the Admission Committee. The Chairman of the committee is a university professor or professor emeritus responsible for the relevant topic. The committee always includes the Doctoral School staff member responsible for foreign students. The future supervisor also assists the committee in its work.

(6) The oral admission interview is conducted via online video connection, and the Doctoral School staff member for foreign students informs applicants of the date and time.
During the interview, the committee verifies the Candidate's professional knowledge, research ideas for the doctoral work, previous scientific activities, and language proficiency.

(7) The committee evaluates applicants on a 100-point scale, based on the following categories:
- Professional intelligence
- Language proficiency
- Suitability for research work
- Publications

Based on this evaluation, the committee recommends or does not recommend admission to the Doctoral Council.
(8) A minimum of 65 points is required for admission. Achieving 65 points is only a necessary condition, and does not guarantee automatic admission.
(9) During their doctoral studies, foreign doctoral students must fulfill the requirements specified in the Doctoral School's training plan.

Chapters VIII–IX
Closing and Entry into Force Provisions
25–26§

This regulation was adopted by the Senate of the University of Miskolc under Resolution No. 87/2023, with effect from 1st April, 2023, and simultaneously repeals the previously adopted and repeatedly amended Operating Regulations of the Kerpely Antal Doctoral School of Materials Science and Technology approved under Resolution No. 190/2016.

Miskolc, September/31st March, 2023

Prof. Dr. Valéria Mertinger
Head of the Doctoral School

Prof. Dr. Zita Horváth
Rector, Chairman of the Senate

Annex 1

Contact Information of the Kerpely Antal Doctoral School of Materials Science and Technology

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Officer responsible for foreign doctoral students' affairs:
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NEPTUN (student information system) administrator:
Éva Stumpf, Engineer Teacher
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Annex 2

Core Members of the Kerpely Antal Doctoral School of Materials Science and Technology

1. Dr. Péter Barkóczy (1976)
PhD (2004, Materials Science), Habilitated (2021), Professor (ME)
2. Dr. Péter Baumli (1976)
PhD (2009, Materials Science), Habilitated (2021), Professor (ME)
3. Dr. Márton Benke (1981)
PhD (2010, Materials Science), Habilitated (2021), Professor (ME)
4. Dr. György Czél (1962)
PhD (1998, Materials Science), Habilitated (2017), Professor (ME)
5. Dr. Zoltán Gácsi (1951)
Doctor of the Hungarian Academy of Sciences (DSc, 2004, Professor Emeritus (ME)
6. Dr. Klára Hernádi (1960)
Doctor of the Hungarian Academy of Sciences (DSc, 2004) Professor (ME)
7. Dr. György Kaptay (1960)
Full Member of the Hungarian Academy of Sciences (2022), Professor (ME)
8. Dr. Tamás Kékesi (1960)
Doctor of the Hungarian Academy of Sciences (DSc, 2006), Professor (ME)
9. Dr. Kálmán Marossy (1949)
PhD (1998, Chemical Sciences), Habilitated (2004), Professor Emeritus (ME)
10. Dr. Valéria Mertinger (1966)
Doctor of the Hungarian Academy of Sciences (DSc, 2018), Professor (ME)
11. Dr. Miklós Nagy (1976)
PhD (2005, Chemical Sciences), Habilitated (2017), Associate Professor (ME)
12. Dr. Árpád Bence Palotás (1966)
Doctor of the Hungarian Academy of Sciences (DSc, 2018), Professor (ME)
13. Dr. Milán Szőri (1980)
PhD (2009, Chemical Sciences), Habilitated (2021), Associate Professor (ME)
14. Dr. Tamás Török (1951)
Doctor of the Hungarian Academy of Sciences (DSc, 2007), Professor Emeritus (ME)
15. Dr. Béla Viskolcz (1967)
CSc (1998, Chemical Sciences), Habilitated (2015), Professor (ME)

Emeritus Core Members of the Doctoral School

16. Dr. Sándor Bárány (1937)
Doctor of Chemical Sciences (1982, Chemical Sciences, recognized in Hungary in 1993), Professor Emeritus (ME)
17. Dr. Pál Bárczy (1941)

CSc (1976, Engineering Sciences), Professor Emeritus (ME)

18. Dr. András Roósz (1945)

Full Member of the Hungarian Academy of Sciences (2004, Engineering Sciences), Professor Emeritus (ME)

Annex 3

Members of the Scientific Discipline Doctoral Council for Materials Science and Technology

Chair:

1. **Dr. Valéria Mertinger**, Professor (DSc)

Deputy Chair:

2. **Dr. Árpád Bence Palotás**, University Professor (DSc)

Voting University Members:

3. **Dr. Zoltán Gácsi**, Professor Emeritus (DSc)
4. **Dr. György Kaptay**, Professor (DSc, Full Member of the Hungarian Academy of Sciences)
5. **Dr. Béla Viskolcz**, Professor (CSc, Habilitated)

Voting External Members:

6. **Dr. Dezső Beke**, Professor Emeritus (DSc), University of Debrecen
7. **Dr. Károly Belina**, Professor (PhD),

8. Dr. Péter János Szabó, Professor (DSc), Budapest University of Technology and Economics

9. One doctoral student with voting rights, elected for the current academic year

Consultative University Members (non-voting):

1. **Dr. Pál Bárczy**, Professor Emeritus (CSc, Habilitated)
2. **Dr. Tamás Kékesi**, Professor (DSc)
3. **Dr. István Kocserha**, Associate Professor (PhD)
4. **Dr. Kálmán Marossy**, Professor Emeritus (PhD, Habilitated)
5. **Dr. László Tóth**, Professor Miskolcinensis (CSc)
6. **Dr. Tamás Török**, Professor Emeritus (DSc)
7. **Dr. Attila Diószegi**, Associate Professor (PhD)
8. **Dr. László Varga**, Associate Professor (PhD)

Secretary (non-member):
Dr. Mária Svéda Kissné, Senior Scientific Fellow (PhD)

EDT Internal Members:

- **Dr. Valéria Mertinger** (DSc), Professor
- **Dr. Zoltán Gácsi** (DSc), Professor Emeritus

EDT Alternate Member:

- **Dr. Árpád Bence Palotás** (DSc), Professor

EDT External Member:

- **Dr. Péter János Szabó** (DSc), Professor, Budapest University of Technology and Economics

Annex 4

Research Areas and Area Leaders of the Kerpely Antal Doctoral School of Materials Science and Technology

- **Chemical Metallurgy:** Dr. Tamás Kékesi, Professor (DSc)
- **Foundry Technology:** Dr. László Varga, Associate Professor (PhD); Dr. Attila Diószegi, Associate Professor (PhD)
- **Interface and Nanotechnologies:** Dr. György Kaptay, Professor (DSc)
- **Plastic Forming of Metals:** Dr. László Tóth, Professor Miskolcinensis (CSc)
- **Metallurgy and Heat Treatment:** Dr. Valéria Mertinger, Professor (DSc)
- **Materials Informatics:** Dr. Zoltán Gácsi, Professor Emeritus (DSc)
- **Space Materials Science and Technology:** Dr. Pál Bárczy, Professor Emeritus (CSc, Habilitated)
- **High-Temperature Equipment and Thermal Energy Management:** Dr. Árpád Bence Palotás, Professor (DSc)
- **Ceramics and Their Technologies:** Dr. István Kocserha, Associate Professor (PhD)
- **Polymer Technology:** Dr. Kálmán Marossy, Professor Emeritus (PhD)
- **Chemical Processes and Technologies:** Dr. Béla Viskolcz, Professor (CSc, Habilitated)

Annex 5

Quality Assurance Plan of the Kerpely Antal Doctoral School of Materials Science and Technology

The quality assurance of doctoral activities is multifaceted, as detailed in Chapter III, Section 15 of the University Regulations. The implementation of these principles is regularly monitored by the Scientific Discipline Doctoral Council, based on reports from the Doctoral Study Committee.

1. Ensuring the Quality of the Awarded PhD Degree

The quality of the PhD degree is ensured by the following measures:

- Doctoral applicants receive the call for applications approved by the University Doctoral Council directly through the Neptun system, and it is also uploaded to the Doctoral School website.
- In appointing the admission committee, the Scientific Discipline Doctoral Council ensures that members of the committee are not the supervisors of the incoming doctoral students, while all research areas are represented.
- Candidates are admitted only after a fair assessment of their previous achievements, selecting the most suitable applicants.
- Supervisors are the Faculty's most outstanding lecturers, actively participating in scientific life, publishing in prestigious journals, and presenting at international conferences.
- The announced research topics align with international trends in the relevant scientific fields.
- When appointing and approving supervisors, the Council verifies that the supervisor has publications that could count toward the doctoral student's degree requirements; if not, the supervision is not supported.
- The Council ensures that full-time scholarship students have at least one responsible supervisor who is a faculty member or researcher at the University of Miskolc and officially affiliated with a relevant institute.
- Lecturers for PhD courses are highly qualified, holding scientific degrees and active in research.
- At the start of each academic year, the Doctoral Study Committee reviews the offered courses and their syllabi and proposes modifications if necessary.
- The doctoral training plan for students admitted after 1st September, 2016, was designed according to the new regulations, ensuring that evaluation is based on actual achievements. In addition to mandatory courses, two optional yet mandatory 2-credit courses (Research Methodology and Scientific Database Management) were introduced to support daily doctoral activities and bibliometric achievements.
- Supervisors actively participate in evaluating doctoral students' work, providing written and oral statements prior to the comprehensive examination.

- Dissertation defense requires that results are published in high-quality journals; therefore, supervisors and host institutes support doctoral students' publishing and participation in scientific conferences.
- Progress in research activities is demonstrated through research seminars, organized every semester. The fourth semester is fully dedicated to preparation for the comprehensive exam; no separate research seminar is held in that semester, and course requirements must be completed by the end of the third semester.
- Procedural matters related to the comprehensive exam are regulated in a separate procedure by the Scientific Discipline Doctoral Council.
- Dissertation reviewers and members of the review committee are leading experts in the field. As with all doctoral processes, conflict of interest is carefully considered, and members must be actively involved in research and development in their scientific area.

2. Electronic personal records play a central role in monitoring progress. They ensure that all achievements are properly registered, and that requests (such as academic leave, exam deferrals, course enrollment, course modifications, completion requests, publication approvals, comprehensive exams, language exams, research seminars, review committee appointments, etc.) are fully documented. This system allows for the objective and up-to-date management of matters related to training and degree completion. Furthermore, it is naturally expected that the supervisor is informed about the doctoral student's requests and progress. Therefore, the Scientific Discipline Doctoral Council will only consider student requests and submissions if they are co-signed by the supervisor.

3. The Kerpely Antal Doctoral School is built upon the undergraduate programs of the Faculty of Materials and Chemical Engineering at the University of Miskolc. The Faculty maintains close contact with its graduates through established meeting practices, and this connection is even stronger with those who have earned a PhD. In maintaining these connections, former doctoral student leaders and members of the Doctoral School who had any contact with the doctoral students during their training play a particularly important role.
The purpose of this contact is twofold: those who have already obtained a PhD should be engaged not only in postdoctoral activities but also in supporting our doctoral training; those who began their studies at the Doctoral School before 2016 and, despite having completed their coursework, are still working on their dissertation, should be engaged to continue their academic activities.

4. To ensure the continuous and long-term operation and accreditation of the Doctoral School, the following set of requirements is established.

a) A person may be a core member of the Doctoral School if they meet the conditions set out in Sections 2(3) and 3 of Government Decree 387/2012 (XII.19.) on doctoral schools, the organization of doctoral training, and habilitation, and additionally:

- Their research activity is active, continuous, and demonstrably successful, manifested in scientific publications or creative works.
- They possess internationally recognized, outstanding scientific achievements: they have at least two Q1 or Q2 publications in a foreign language, or they are the author of at least one monograph published by a recognized international publisher.
- Their five publications in the last five years demonstrate that their publication activity is high-quality and continuous.
- Five publications over their entire career are of high prestige, demonstrating that they have conducted high-level scientific work in their field, published in venues accessible to the international research community, with measurable impact in independent citations.
- A list of their publications and scientometric data is available, imported from www.mtmt.hu
- They participate continuously and actively in the activities of the Doctoral School.
- More than 70% of their activities related to doctoral training are carried out in the Doctoral School of which they are a core member.
- For new incoming core members, a declaration must be submitted to the head of the Doctoral School regarding their legal relationship with the University of Miskolc, as well as their commitment to carry out core member and associated supervisory activities within the Doctoral School.

b) A person may teach in the Doctoral School if they hold a scientific degree and the doctoral subject has been approved for announcement by the Scientific Doctoral Council.
c) The doctoral topic is determined according to Section 13(1) of Government Decree 387/2012 (XII.19.).
d) A person may announce a doctoral topic in the Doctoral School if they meet the conditions set out in Section 13(4) of Government Decree 387/2012 (XII.19.).

e) A person may serve as a doctoral supervisor in the Doctoral School if they meet the conditions set out in Section 13(5) of Government Decree 387/2012 (XII.19.) and a doctoral student has applied for the announced topic.
f) Additional requirements for topic announcers, supervisors, and co-supervisors:

- An independent topic announcer/supervisor must have held a doctoral degree for at least 5 years.
- A co-topic announcer/co-supervisor must have held a doctoral degree for at least 3 years.
- They must have at least two Q2 publications.
- In the last five years, they must have at least five scientific publications, and at least five additional publications over their entire career.
- They must have English language competence based on the following criteria:
  1. At least 1 month of foreign research/teaching experience.
  2. Active participation as a speaker at at least 3 international conferences.

3. At least 1 semester or 1 course taught in English and experience supervising a thesis in English.
4. At least 5 English-language publications.
5. At least 1 co-authored international publication.

At least three of the five conditions must be met for approval as a topic announcer/supervisor. The Study Committee reviews the submitted applications, and the Scientific Doctoral Council decides on approval.

For new incoming instructors, supervisors, and topic announcers, a declaration confirming the fulfillment of the above points must be submitted to the head of the Doctoral School.

g) In all decision-making, only data available in the MTMT database may be considered, and publication activity must be verified using MTMT records. Scientific works not listed in the MTMT database cannot be considered when evaluating publication activity.