



**HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE  
SCIENCES**

**DOCTORAL SCHOOL OF MECHANICAL ENGINEERING**

**Head of Doctoral School  
Dr. Gábor Kalácska  
Professor, Doctor of the Hungarian Academy of Sciences**

**STRUCTURE AND FUNCTIONING OF THE  
DOCTORAL SCHOOL**

**GÖDÖLLŐ  
2022**

**COMPILED BY:**

**Dr. Gábor Kalácska, professor, Doctor of the Hungarian Academy of Sciences**  
**Dr. István Farkas, professor, Doctor of the Hungarian Academy of Sciences**  
**Dr. habil. István Seres, associate professor, PhD**

**EDITOR:**

**Dr. Gábor Kalácska, professor, Doctor of the Hungarian Academy of Sciences**

# CONTENT

	Oldal
<b>1. Establishment of the Doctoral School</b>	<b>5</b>
<b>2. Organisation of the Doctoral School</b>	<b>5</b>
2.1. <i>Name and details of the Doctoral School</i>	5
2.2. <i>Head and members of the Doctoral School (MTDI)</i>	5
2.3. <i>Core members of the Doctoral School</i>	5
2.4. <i>Doctoral School of Mechanical Engineering Council (DIT)</i>	6
2.5. <i>Organisation of the Doctoral School of Mechanical Engineering</i>	6
2.5.1. School Leadership Council	7
2.5.2. Field Coordinators	7
2.5.3. Committees	8
2.5.4. Supervisor	10
<b>3. The role of the Doctoral School of Mechanical Engineering in the admission procedure</b>	<b>11</b>
<b>4. Teaching at the Doctoral School of Mechanical Engineering</b>	<b>12</b>
4.1. <i>General guidelines</i>	12
4.2. <i>Structure of the teaching-research programme of the Doctoral School of Mechanical Engineering</i>	13
4.3. <i>Complex exam</i>	14
4.4. <i>The absolutorium</i>	15
<b>5. Research management tasks of the Doctoral School of Mechanical Engineering</b>	<b>15</b>
5.1. <i>Supervision of the doctoral researcher's work</i>	15
5.2. <i>Publication practices of the Doctoral School of Mechanical Engineering</i>	17
<b>6. The research and dissertation phase</b>	<b>17</b>
6.1. <i>Pilot debate</i>	17
6.2. <i>Public debate</i>	18
6.3. <i>Deadlines for the award of the degree</i>	19
<b>7. Tasks of the Doctoral School of Mechanical Engineering during the habilitation procedure</b>	<b>19</b>
<b>8. Quality assurance system of the Doctoral School of Mechanical Engineering</b>	<b>19</b>
8.1. <i>Quality control requirements for the admission procedure</i>	19
8.2. <i>Quality control requirements for doctoral training</i>	19
8.3. <i>Quality control requirements for degree acquisition</i>	20
8.4. <i>Quality control requirements for habilitation</i>	20
<b>9. Accountability system of the Doctoral School</b>	<b>21</b>
<b>10. Financial management of the Doctoral School of Mechanical Engineering</b>	<b>22</b>
<b>attachments</b>	<b>23</b>
<b>Personal background of the organizational structure of the Doctoral School</b>	<b>23</b>
<b>Determination of the publication points</b>	<b>27</b>
<b>EVALUATION OF RESEARCH SCIENTIFIC ACTIVITY</b>	<b>30</b>
<b>ELECTRONICALLY AVAILABLE MATERIALS</b>	<b>32</b>
<b>FORMS</b>	<b>32</b>
<b>DETAILED DESCRIPTION OF MTDI SUBJECTS</b>	<b>32</b>

## Notations

<b>Abbreviations</b>	<b>Nevek</b>	<b>Names</b>
MATE	Magyar Agrár és Élettudományi Egyetem	Hungarian University of Agriculture and Life Science
MTDI	Műszaki Tudományi Doktori Iskola	Doctoral School of Mechanical Engineering
DHT	Doktori és Habilitációs Tanács, MATE	Doctoral and Habilitation Council, MATE
DHK	Doktori és Habilitációs Központ	Doctoral and Habilitation Centre
MAB	Magyar Akkreditációs Bizottság	Hungarian Accreditation Committee
DIT	Műszaki Tudományi Doktori Iskola Tanácsa	Doctoral School of Mechanical Engineering Council
KÉB	Képzési bizottság	Educational Committee
MIB	Minőségügyi bizottság	Quality Committee
KEB	Kutatás Ellenőrzési bizottság	Research Monitoring Committee
HAB	Habilitációs bizottság	Habilitation Committee
PC	Kötelező szóbeli haladási beszámoló	Progress Control, Mandatory
MIT	Műszaki Intézet, MATE	Institute of Technology, MATE
EDSZ	Egyetemi Doktori Szabályzat	University Doctoral Regulations
TDK	Tudományos Diákkör	Scientific Student Body

## **1. Establishment of the Doctoral School**

The Doctoral School of Mechanical Engineering (MTDI) of the Hungarian University of Agricultural and Life Sciences (hereinafter referred to as MATE) is based on the subject groups of Agricultural Energy, Environmental Engineering and Fundamentals of Agricultural Mechanical Engineering, which were approved by the Hungarian Accreditation Committee (MAB) in 1993 and provisionally accredited in 2000. Final accreditation in the field of agricultural mechanical engineering was granted in 2002. The latest successful accreditation date is 2019.

## **2. Organisation of the Doctoral School**

### **2.1. Name and details of the Doctoral School**

Name: Doctoral School of Mechanical Engineering (MTDI)

Location of operation: Hungarian University of Agriculture and Life Sciences (MATE),  
Szent István Campus  
2100 Gödöllő, Páter Károly u. 1.

Phone: (+36-28) 522949

e-mail: [mtdi@uni-mate.hu](mailto:mtdi@uni-mate.hu)

website: [www.mtdi.mate.hu](http://www.mtdi.mate.hu) (documents can be downloaded)

stamp: MATE

Doctoral School of Mechanical Engineering  
2100 Gödöllő Páter Károly u 1.

The Doctoral School is part of MATE. Its organisational structure is shown in Fig. 1.

### **2.2. Head and members of the Doctoral School (MTDI)**

The head of the Doctoral School is appointed by the Rector on the recommendation of the regular members of the Doctoral School, the Doctoral and Habilitation Council (DHT) and the Senate. His/her term of office is 5 years. He is assisted by field coordinators and committees. The heads and members of the committees and the Secretary of the Doctoral School are appointed by the Doctoral School of Mechanical Engineering Council (DIT) on the recommendation of the Head of the DI.

The requirements for the members of the MTDI and other contributors (supervisors, lecturers, etc.) are defined by the current Government Decree (387/2012 (XII.19)), the MAB and the MATE Doctoral Regulations.

### **2.3. Core members of the Doctoral School**

Senior lecturers and external researchers (professors, habilitated associate professors) employed on a full-time basis in the field of engineering at MATE who meet the conditions listed in Section § 2 (3)) of Government Decree 387/2012 (XII.19). The majority of the core members are university professors. The members may include 1 professor emeritus (2.§ (4)). The number of core members shall always be at least 7 persons. On the basis of a proposal by the head of

the DI, the existing members of the DI will make a proposal for the membership of the core members, which will be approved by the DHT.

#### **2.4. Doctoral School of Mechanical Engineering Council (DIT)**

The DIT is a body that assists the work of the Head of the MTDI, elected by the MTDI's core members and appointed by the Doctoral and Habilitation Council (DHT) (Government Decree 387/2012 (XII.19), § 10 (1)).

The doctoral students are represented in the DIT by 1 doctoral student.

The members of the DIT are appointed for an indefinite term.

The Chairman of the DIT is the current Head of the Doctoral School, the Secretary is the current Secretary of the DI.

The DIT in accordance with the Government Decree 387/2012 (XII.19), § 10 (1):

- establishes the requirements for the doctoral act and the habilitation procedure;
- - approves the doctoral topic advertiser, thesis supervisors and the teaching staff of the doctoral school;
- - proposes and decides on the doctoral topics proposed for publication;
- - proposes the nationalisation of academic degrees obtained abroad;
- - makes a proposal to the admissions committee, to admit or reject applicants, to interrupt and dismiss doctoral training;
- - recommends matters relating to the complex examination and the initiation of the degree award procedure;
- - decides on the modification of subjects and curricula, on the acceptance of foreign part-time studies;
- - proposes the admission of a habilitation subject.

The DIT meets at least four times a year, the dates of which are set in accordance with the work programme of the Doctoral and Habilitation Board (DHT). Meetings are usually held in September, November, February and May.

The DIT takes its opinions and decisions by open ballot and simple majority. A quorum is reached if more than 50% of the members are present. Votes can include the written votes of members not present.

The Chairman of the DIT may invite non-voting experts other than members to attend meetings of the DIT.

The DIT establishes its own working methods.

#### **2.5. Organisation of the Doctoral School of Mechanical Engineering**

The model for the operation of the MTDI is developed and approved by the Head of the MTDI and the core members, on the basis of a proposal from the Head of the School. The organisation (Fig. 1) and operation of the doctoral school follows the specifications of the accredited field of study - agricultural mechanical engineering. Accordingly, priority is given

to research and subjects taught in Agroenergetics and Environmental Engineering, General and Agricultural Mechanical Engineering, Agro-technical Informatics and Economics, Agro-Mechatronics.

Operational tasks are carried out with the support of the School Leadership Council, the field coordinators and the committees:

- - Educational Committee (KÉB),
- - Quality Committee (MIB),
- - Research Monitoring Committee (KEB),
- - Habilitation Committee (HAB).

#### *2.5.1. School Leadership Council*

Its members are former Heads of the MTDI who are also voting members of the Doctoral School Council (DIT), either as a core member or as an elected member of the Council. Their role is to conduct the recruitment process, to give opinions on individual equity cases and to advise.

#### *2.5.2. Field Coordinators*

The field coordinators are appointed by the Head of the MTDI from among the MTDI core members and the DIT professors. Their basic task is to manage and represent the professional-administrative activities of students enrolled in each discipline at DIT throughout the entire training and degree-granting process. In this context, they are responsible for:

- Assessing research work plans and submitting them for approval by the DIT;
- • maintaining constant contact with the supervisors;
- • continuous monitoring of the doctoral student's progress, ensuring the necessary procedure;
- • monitoring the fulfilment of the training obligation;
- • control of publishing activity;
- • proposing the topics of the complex exam to the DIT;
- • checking the conditions for initiating the graduation procedure and supervising the graduation process;
- • control and conduct the organization of the workshop debate (pilot defence);
- • proposing opponents and members of the judging panel to the DIT;
- • making a proposal to the Public Defence Committee to the DIT, conducting the defence.

### 2.5.3. Committees

- Their leaders and members are elected by the DIT on the proposal of the Head of the DI, for a term of 3 years, renewable for any number of terms. A representative of the doctoral students will be appointed by the Chairman from among the doctoral students holding a state scholarship, and his/her mandate will be valid until the end of the training period or until his/her withdrawal or resignation. The committees:
  - are to make their recommendations and decisions by open ballot and simple majority;
  - - are to have their meetings quorate if more than 50% of the members are present;
  - - votes will include the written votes of members who are not present;
  - - will determine their own working methods;
  - - may call upon experts to assist them in the performance of their duties, who may attend meetings without the right to vote.

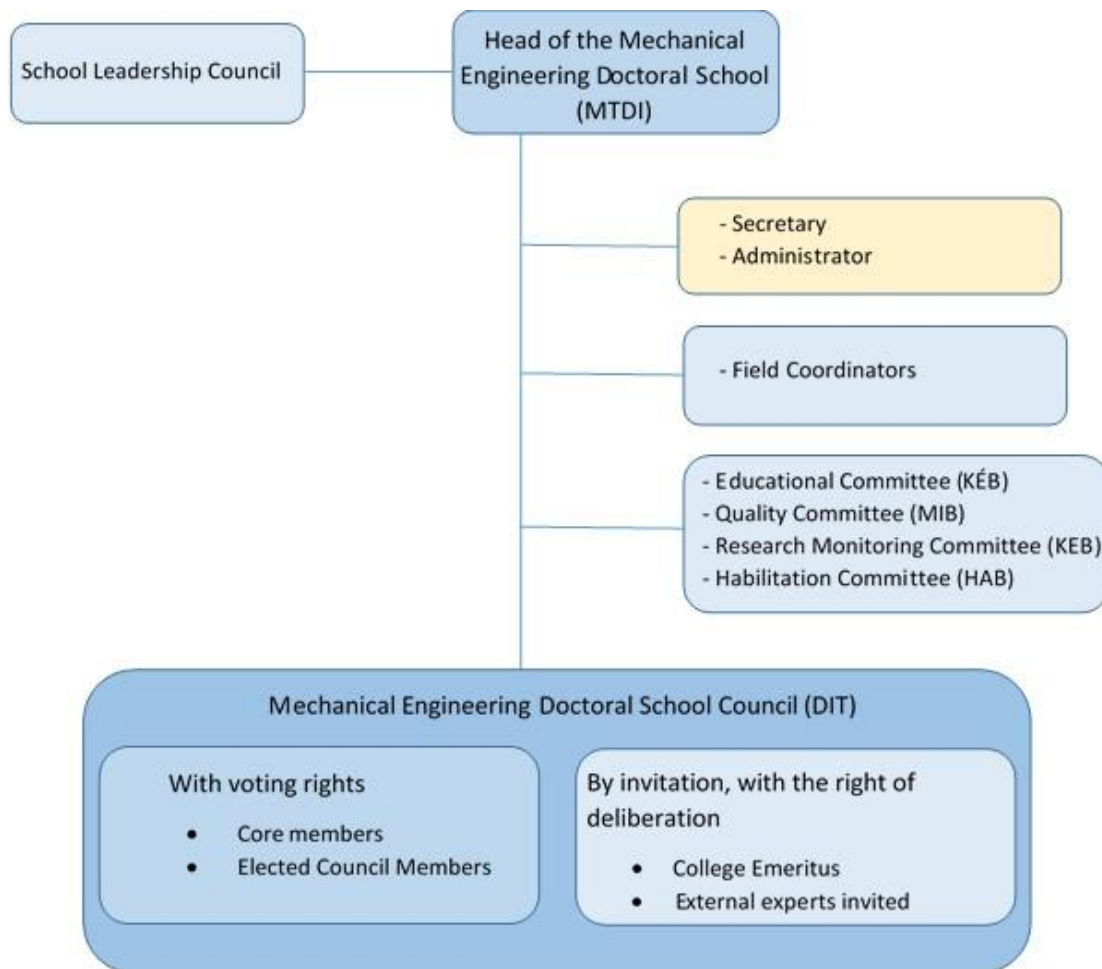


Fig. 1. The Organisational structure of the Doctoral School of Mechanical Engineering

### Educational Committee (KÉB)

Members: The number of elected members of the KÉB is 3. (leader, member, student);

*Responsibilities of the KÉB:*



- to manage the admission procedure for doctoral candidates, the participation of the leader of the Committee in the work of the Admission Committee, the preparation of the ranked list of candidates proposed for admission to the DIT;
- - organising and supervising courses;
- - maintaining constant contact with doctoral students;
- - monitoring Neptun records;
- - monitoring teaching activities;
- - proposing curricula, subject development and credit points;
- - advising on educational matters.

The University Doctoral Regulations and the Rules of Procedure shall govern the criteria for decisions and proposals and their consideration in the tasks of the KÉB.

### **Quality Committee (MIB)**

Members: The MIB has 3 members (leader, member, student);

The tasks of the MIB are:

- develop, maintain and propose to the DIT:
  - the requirements for admission to doctoral training;
  - the complex examination requirements and methods;
  - the conditions for starting the degree and conducting the procedure;
  - the conditions for awarding the degree;
  - requirements for the habilitation procedure;
  - monitor the fulfilment of the listed tasks;
  - if necessary, prepare a report for the MAB on the work of the Doctoral School of Mechanical Engineering;

In the tasks of the MIB, the proposals must be made in accordance with the requirements of the MAB, the MATE Doctoral Regulations, the Quality Assurance System of the MATE Doctoral Schools and the specifics of the programs of the Doctoral School of Mechanical Engineering.

### **Research and Monitoring Committee (KEB)**

Members: the minimum number of members of the KEB is 3 (the Head of MTDI, at least two experts invited from among the subject area coordinators, other experts invited by the Head of MTDI).

Tasks of the KEB:

- a taking care and rating of literature reviews and „Progress” reports
- - organising and evaluating doctoral presentations and reporting on research progress every six months
- - grading the research reports of second-year doctoral students,
- - organising, conducting and grading any re-take reports.

## **Habilitation Committee (HAB)**

Members: The number of elected members of the HAB is 3 (leader + 2).

Tasks of the HAB:

- monitoring the conditions of the habilitation procedure;
- - recommendation of admission to the DIT;
- - proposal for the procedure and the members of the committee to the DIT;

The HAB shall be governed by the written regulations of the University Doctoral Regulations and the MATE Habilitation Regulations with regard to the criteria for decisions and proposals and their consideration.

### *2.5.4. Supervisor*

The DIT appoints a supervisor (possibly also a co-supervisor) for the doctoral topic proposed for publication, after the application (Form 6.1) submitted to the DI has been accepted, published and the doctoral candidate has been admitted.

#### **The supervisor should:**

- have authoritative publications related to the offered topic.
- - be a habilitated senior lecturer\* or a lecturer/researcher\*\* with an academic degree who has an outstanding record in the field of the topic.
- - be under the age of 65 years\*.

In order to ensure the effectiveness of the research work, it is advisable for supervisors to involve doctoral students as well as TDK students in the research.

\*After the age of 65 years, topic proposal or topic supervising is possible with the appointment of a co-topic supervisor.

\*\*Research performance is assessed by the DIT.

#### **Responsibility of the supervisor:**

- Participation in the admission procedure for doctoral students.
- - Assisting the doctoral student in all training and research activities, with priority to:
  - - Preparing the preliminary work plan for the admission of the doctoral candidate,
  - - assisting in the preparation of the doctoral candidate's preliminary preparation for the doctoral studies,
  - - processing the literature,
  - - preparing the final work plan,
  - - the choice of subjects,
  - - pursuing studies abroad.
- - Guidance of the doctoral student, with emphasis on:
  - - In collaboration with the Head of Department in the teaching activities,
  - - research,
  - - publication activities,
  - - research proposal work,
  - - Supplementing the research infrastructure (grant applications, use of financial resources).
- - Making recommendations to the requested field coordinator:
  - - to select the topics for the complex examination,

- - in the appointment of the Evaluation Committee.
- - in the organisation of the pilot debate..

The term of office of the supervisor lasts until the doctoral candidate is awarded a doctorate or is excluded from the MTDI.

### **3. The role of the Doctoral School of Mechanical Engineering in the admission procedure**

The admission procedure for applicants to the MTDI is organised by the KÉB.

By 31 January each year, the applicant's supervisors can propose topics by filling in Form 1. Each year, the MTDI's core members advertise themes. At the same time, the head of the hosting department declares that the infrastructure required for the topic is available (Form 2). By 31 March each year, the DIT takes a position on the topics proposed by the topic leaders, during which it examines the admissibility of the topic, the competence of the topic supervisor and the availability of the infrastructure required for the research on the basis of the forms submitted. Once approved by the DIT, the topics will be published on the [www.doktori.hu](http://www.doktori.hu) website.

Applicants for admission to the MTDI may only apply with a detailed work plan (Form 3; for individual degree applications, Form 5), which has been agreed with the topic supervisor, for the topic advertised in the programme. The work plan submitted by the applicant will be evaluated and graded by the DIT during the admission procedure and will be taken into account in the admission decision.

Requirements for the candidate (in case of Hungarian citizenship):

- an MSc degree with at least a good level grade in a field related to the field of the MTDI;
- - if the degree is lower than a good level grade or not relevant to the field of specialisation, the candidate must have at least five years of successful research experience in the field of the degree and present the results obtained;
- - in the case of a diploma in a field other than mechanical engineering, the DIT requires, as a condition of admission, that the candidate must pass an examination in the subjects relevant to the doctoral topic within one year, after which he/she may be admitted to the programme;
- - research activity (TDK, departmental research, scientific publications, etc.) related to the subject of the doctoral thesis for at least one year;
- - an intermediate C level language exam in one of the world languages (English, German, French, Russian, Spanish and Italian);
- - research vocation, to be assessed by the admission board during the interview.

The members of the admissions committee with voting rights are the head of the MTDI, the leader of the KÉB, the director of the Institute of Technology and the secretary of the MTDI, as well as the school leadership council with voting rights and the prospective supervisor with the right to express an opinion. The admissions committee, with the assistance of the DIT, will rank the candidates on the basis of their degree, previous research activity, subject expertise, work plan and research habitus, according to the assessment described in the University

Doctoral Regulations. In the case of applications from foreign students for English language courses, an ad-hoc committee of 3 members, appointed by the Head of the MTDI, will decide on the ranking of the candidates.

Admission or rejection is decided by the DHT on the basis of a recommendation from the DIT. Once the decision has been taken, the Doctoral and Habilitation Centre will be responsible for the notification of students and the enrolment procedure.

The reception and information of first-year doctoral students is organised by the Head and Secretary of the MTDI in the frame of the MTDI Forum in the first week of the academic year.

The MTDI may also welcome applicants for individual doctoral studies. A doctoral student admitted as an individual doctoral candidate can start the research and dissertation phase after passing the complex examination.

Requirements to be fulfilled before admission as an individual doctoral candidate (in addition to the MTDI admission requirements):

1. at least five years of research experience;
2. a degree in a specialised field (if the degree is not related to the field, the DIT will assess eligibility for admission and may require the completion of examinations before starting the degree);
3. evidence of publication activity in a field related to the field of research by completing 60 publication credits;
4. the candidate fulfils the language and publication requirements for the complex examination.

Doctoral training in the framework of international cooperation is regulated in individual cases by the DHT and the MTDI.

## **4. Teaching at the Doctoral School of Mechanical Engineering**

### **4.1. General guidelines**

The teaching work of the MTDI is organised and directed by the KÉB on the basis of the University's Study and Examination Regulations.

Students study for four semesters and must complete a total of 120 credits. Deviations from the model curriculum set out in Annex 2 are possible in duly justified cases, subject to prior approval by the KÉB.

Students must enrol and register for courses by 14 October in the autumn semester and by 14 March in the spring semester. In addition to the compulsory subjects, the choice of elective subjects is subject to the approval of the supervisor and the field coordinator.

Students are required to attend the sessions of the curriculum agreed with the supervisor. The coursework must be reported in the form prescribed in the curriculum. Examinations are held in person with the lecturer of the subject.

The autumn semester must be completed by 31 January and the spring semester by 31 August.

The DIT decides on the participation abroad on the recommendation of the supervisor and the KÉB.

The curriculum of the Doctoral School of Mechanical Engineering is set out in Annex 2 and the subjects in Annex 3. The DIT is authorised to change this on the proposal of the Head of the MTDI.

#### **4.2. Structure of the teaching-research programme of the Doctoral School of Mechanical Engineering**

Out of the 120 credits required during the training period, doctoral students can obtain 40 credits by completing the examination requirements, 8 credits by teaching, and the rest by carrying out research during the training period. The different activities that can be carried out during the training period have been broken down by the MTDI into units as follows. The minimum number of points required can be obtained on this basis.

- **Unit I** means the completion of the required subjects. This includes taking the subjects, participating in their contact hours and completing the examination requirement. In line with national and international practice, MTDI teaches its subjects in English only. If a doctoral student entering the MTDI training system does not already have a C level English language examination, he/she must undertake to take and complete the courses in English.
- The compulsory courses in the Doctoral School of Mechanical Engineering are those covering the general disciplines of research and engineering. These subjects are compulsory for all MTDI scholars and correspondence students.
- - Elective subjects are research area-specific subjects which, building on the previous "compulsory" subjects, provide answers to theoretical and methodological questions in the fields of research in which MTDI has a special interest.
- **Unit II** refers to the student's teaching activity during the training period, which is a teaching activity at a university or college (classroom or laboratory) related to the doctoral student's research topic. A minimum of two hours per week per semester is expected by the MTDI, for which two credits are awarded (see model curriculum in Annex 2). This is accepted by the MTDI with the joint attestation of the head of department and the supervisor (Form 7), which is then certified by the leader of the KÉB in the Neptun system. If the teaching activity is carried out by the doctoral student at another university or college, the dean/director of the institution and the supervisor must certify that the subject has been completed.
- **Unit III** refers to research work during the training period, consisting of research work assessed as described in Chapter 5.
- **Unit IV** refers to the student's publication activity. The score system for the assessment of publication activity is set out in Annex 4. On the basis of the calculated publication points, the credit points that can be accounted for are three times higher in the training phase and twice in the dissertation phase.

Table 1. summarises the credits required and the credits that must be obtained.

**Table 1** Credits associated with study units

Study Unit	MTDI required limits (credits)	
	minimum	maximum
I. Completion of subjects	32	
II. Teaching		8
III. Research work	36	52
IV. Publication	28	52

A doctoral student who does not have the opportunity to carry out teaching activities in an institution of higher education may present his/her work to the students within the framework of the teaching activities of the supervisor's institute, for which he/she may receive teaching credits. Otherwise, the credits earned by completing Unit II may only be exchanged for work in Unit IV. Those who are unable to complete 100% of the research work in Unit III may also replace the points lost by work in Unit IV.

The subject structure and the curriculum of the MTDI as described above are set out in Annex 2. A short five-line description of the subjects taught and the detailed topics of the subjects are available on the Doctoral School's website ([mtdi.mate.hu](http://mtdi.mate.hu)).

### 4.3. Complex exam

The training phase is completed by a two-part complex examination, the successful completion of which is a prerequisite for progression to the “Research and Dissertation phase”.

The precondition of the complex exam, that the candidate must have a basic level knowledge of a second foreign language, justified by a certificate or by an oral presentation during the exam. If the state language examination at intermediate level type C attested at the time of admission is not in English, the second language has to be in English.

The publication requirement for admission to the complex examination is at least two accepted publications in the field of the research, one of which preferable must have been published in either WoS or Scopus (min. Q2).

For the theoretical part of the complex examination, two subjects (topics) relevant to the research topic will be defined by the DIT at the time of admission, on the basis of a proposal from the field coordinator.

In the dissertation part of the complex examination, the candidate will give a presentation of his/her knowledge of the literature, report on his/her research results, outline his/her research plan for the second stage of doctoral studies and the timetable for the preparation of the dissertation and the publication of the results.

The examination board will mark the theoretical and dissertation parts of the examination separately. A report of the complex examination, including a written evaluation, will be drawn up. The results of the examination shall be announced on the day of the oral examination. The

complex examination shall be passed if a majority of the members of the examination board pass both parts of the examination. If the theoretical part of the examination is unsuccessful, the candidate may retake the examination in the subject(s) not passed on one further occasion during the examination period. The dissertation part of the examination may not be repeated in the event of failure.

#### 4.4. The absolutorium

A prerequisite for the award of the diploma is the acquisition of all the required credits.

### 5. Research management tasks of the Doctoral School of Mechanical Engineering

#### 5.1. Supervision of the doctoral researcher's work

In general, the DI contributes to the successful development of the research topic as follows:

- providing professional support on specific methodological issues of the research,
- support the publication and presentation of research results at conferences,
- assist in the organisation of study abroad opportunities, taking into account the topic and the language skills of the doctoral student.
- To monitor, evaluate and support the progress of the doctoral studies, it organises regular, compulsory oral reports (PC-progress control) according to a semester timetable (Table 2), which is compulsory for both full-time and correspondence students. The assessment of the reports is as follows:
  - PC 1 and PC 3 for the assessment of the "Progress Control": 3-4 credits/PC (Unit III)
  - PC 2 – Literature processing: 10-18 credits (Unit III).
  - PC 4 – Research report 10-14 credits (Unit III)
  - PC 5 - PC 8 – Research progress report 8-10 credits/PC

**Table 2.** Schedule of mandatory oral reports (PC)

Date		Number	Content	Evaluation
Training and research phase	Semester I, December	PC 1	Research work plan, literature processing	Field coordinators, supervisor and KEB (acceptable / to be improved / 3-4 credits)
	Semester II, March	PC 2	Literature review, critical appraisal, research tasks, publication plans	Field coordinators, supervisor and KEB (scoring 10 - 18 credits / to be corrected)
	Semester II, June	PC 3	Research progress, publications	Field coordinators, supervisor and KEB (progress scoring, suggestions, guidance / 3-4 credits)
	Semester III, December- January	PC 4	Progress in research, publications, Defence of "Research report"	Field coordinators, supervisor and KEB (evaluation, proposals, guidance / 10-14 credits)

	Semester IV, June	first final research report		
		complex exam		
Research and dissertation phase	Semester V, December	PC 5	Detailed presentation of research results, expected theses	Field coordinators, supervisor and KEB (progress scoring, suggestions, guidance / 8-10 credits)
	Semester VI, June	PC 6	Detailed presentation of research results, expected theses and their publication	Field coordinators, supervisor and KEB (progress scoring, suggestions, guidance / 8-10 credits)
	Semester VII, December	PC 7	Outline of the thesis, overview presentation: literature, methodology, results, expected theses, publication results	Field coordinators, supervisor and KEB (progress scoring, suggestions, guidance / 8-10 credits)
	Semester VIII, June	PC 8	summary presentation, theses, publications (pilot defence)	Field coordinators, supervisor and KEB, invited guests, (referees) / 8-10 credits

It is the responsibility of the supervisor to provide concrete support for the research work. The MTDI will support the research work through ongoing debriefing and reporting.

Accordingly, doctoral students are expected to complete the following tasks:

- By the end of October of the first academic year, submit the **Work Plan** signed by the supervisor in accordance with Form 4. The submitted work plan will be handed over by the field coordinator to a reviewer (3 weeks deadline for review), whose review will be taken into account when the doctoral student presents and defends his/her research work plan at the 1st PC (progress control) lecture for students in December. The field coordinators and experts (evaluation committee) present will grade it (acceptable or to be corrected). In case of correction, the student will return the revised work plan to the field coordinator in January. The research work plans proposed for approval by the field coordinators are presented at the DIT meeting by the coordinators in February and approved by the DIT.
- By 28 February of the first academic year, the doctoral student must submit a written **Literature review** (see Form 8), which the doctoral student will present in March in the PC 2 lecture. Based on the submitted written material and the oral presentation, the paper will be graded by the evaluation committee present. This may be done by returning the paper for correction or by awarding 10-18 credits depending on the merit of the work. In case of correction, the updated literature review must be returned to the field coordinator within three weeks. The literature review should include a critical analysis of the publications related to the topic, identifying areas of disagreement or unclear issues as described in Form 8.



- Thereafter, after submission of the literature review, the doctoral student is required to report (Table 2, PCs) at least once every six months to the supervisor, the field coordinators and invited experts on the ongoing progress of the research. A report is a professional, substantive summary ppt presentation of approximately 15 minutes, followed by 10-15 minutes of discussion, guidance and evaluation. Lost credits may be compensated with publication points. If no substantive progress is detected at the next presentation, the field coordinator and the KEB will investigate the reason for the possible impediment and take the necessary measures.
- By 15 December of the second academic year, the doctoral student must submit a written and consolidated **Research Report** (see Form 9), including a list of publications on the topic. The research report must be presented and defended in an oral presentation at the 4th PC in January, announced for the third semester. The evaluation committee present (field coordinators, KEB, invited experts) will evaluate and give marks for the submitted paper (already reviewed by the coordinator or his/her invited referee), the presentation and the peer discussion. If the doctoral student does not obtain at least 10 of the available 14 credits, he/she must submit a new report in due time and defend it again. If at least 10 but less than 14 credits are obtained, the lost credits may be made up by publications for the award of the absolutorium. Students who do not submit their research report on time may make up the research report in the following year at the latest.

## **5.2. Publication practices of the Doctoral School of Mechanical Engineering**

The doctoral student's publication activity is evaluated as follows.

A publication is considered to be of scientific merit if it is published in a professional/scientific journal covering the research areas of the Doctoral School or in another authoritative journal (with an editorial board and an English abstract) and if it can be shown to contain a substantial original result(s) in the field of the given discipline.

The DIT does not accept a publication in a daily or weekly journal as a communication of scientific value, but it has a place in the list of literary activities - other category, as it also refers to the professional public activity and habitus of the author.

## **6. The research and dissertation phase**

### **6.1. Pilot debate**

The doctoral student must defend the thesis in a pilot (workshop) debate. The topic supervisor, in cooperation with the field coordinator, initiates the scheduling of the pilot debate and checks that the minimum requirements are met.

A pilot debate can only be organised if the candidate has a publication record of at least 60 points according to Annex 4 and, in addition to the minimum publication score, at least 3 peer-reviewed publications in national and 2 in international journals (at least 2 out of 5 with impact factor or Q1 or Q2 classification - - *the impact factor is checked by the Web of Science JCR database (<https://jcr.clarivate.com>), while the journal ranking Q1, Q2 by the Scopus SJR database*

(<https://www.scimagojr.com>). At this stage, it is still possible to submit journal articles with an acceptance statement.

For the workshop discussion, a thesis book must be prepared in accordance with the content and format requirements specified in the doctoral regulations, and a printed, typed copy, signed by the supervisor, must be submitted to the subject coordinator for formal checking, together with electronic copies of the key publications (journal articles), at least 1 month before the planned date.

At the same time as the thesis book is presented, the supervisor, in consultation with the field coordinator, will propose two referees (opponents) in the "Pilot Debate Request Form", both in paper and electronic form. One of the referees must be a lecturer with an academic degree from MATE Institute of Technology (MIT) and the other must be a principal external referee (for students in English language courses, both may be external referees), and one of them may also be an opponent in the public defence. The supervisor will also propose a protocol-secretary, who will be an MIT lecturer/researcher with a PhD degree.

Once the thesis book and the opponents have been approved, the actual Pilot Debate can be organised. The MTDI Secretary will first invite the opponents to take up the assignment and then, in case of a positive response, the candidate/supervisor will agree on a date with the chairperson, the opponents and the secretary.

The chairperson of the Pilot Debate will be the field coordinator or the head of the MTDI or his/her delegate. The head of the MTDI will decide.

On the basis of a mutually convenient date, the candidate shall prepare a model invitation and send it to the Secretary of the Doctoral School. A copy, signed by the Head of School, will be sent electronically by the Secretary of the Doctoral School to the academic community one week before the debate. If external professional guests are required, the candidate/supervisor must arrange for their invitation.

The documentation of the Pilot Debate (minutes, attendance sheet, request for opponent's comments) will be taken care of by the protocol secretary and will be handed in at the Doctoral and Habilitation Centre after the debate.

The minutes should include the date and place of the debate, the names of the chairperson and opponents, the names of the participants and their main questions and comments, the answers given by the doctoral student and the proposal for the future of the thesis as a result of the debate.

The attendance sheet should include the date and place of the workplace discussion, the name of the doctoral student and the topic (title) of the thesis in the header, and the names, academic degrees, workplaces and signatures of the participants.

Additional materials for the organisation of the Pilot Debate (request for a debate, sample invitation to the debate) are included in Forms 10 and 11.

## **6.2. Public debate**

Following the Pilot Debate, the field coordinator will propose the chairperson, vice-chairperson, members and alternates, opponents and substitutes of the public examination

evaluation committee, as in the case of the complex examination committee, for approval by DIT. Only one of the opponents of the pilot debate may be the same as one of the opponents of the public debate. The proposal is approved by the DHT.

### **6.3. Deadlines for the award of the degree**

The doctoral candidate must submit a doctoral thesis book within three academic years following the complex examination, as specified in the doctoral regulations. In cases of special merit, this deadline may be extended by a maximum of one year as laid down in the doctoral regulations. The maximum period of interruption in the degree procedure shall not exceed two semesters.

## **7. Tasks of the Doctoral School of Mechanical Engineering during the habilitation procedure**

The Habilitation Committee of the MTDI acts on the basis of the University Doctoral Regulations (EDSZ). The relevant provisions are set out in the EDSZ.

In addition, the Doctoral School of Mechanical Engineering provides for the following:

- At the time of application for the habilitation procedure, the candidate is required to submit a short, written summary of his/her most significant scientific achievements, of approximately 10 pages, which justifies the habilitation;
- - One external and one internal member of the committee appointed to conduct the habilitation procedure will be asked by the DIT to provide, in particular, a written opposition opinion evaluating the candidate's scientific work. The opinion shall be sent to the candidate, who shall respond orally (possibly in writing) before the start of his/her lectures. The committee will then take its first opinion by a secret ballot.

## **8. Quality assurance system of the Doctoral School of Mechanical Engineering**

The quality assurance system of the DI is based on the principles set out in the "MATE Quality Assurance System for Doctoral Schools". The specific requirements for doctoral schools are summarised below. These include methods for applying the general principles.

### **8.1. Quality control requirements for the admission procedure**

The supervisor may admit doctoral candidates in the field and subject group advertised and approved by the Doctoral School Council (DIT). To this end, prospective supervisors may submit their topics to be advertised for the following year by 31 January each year (see section 3).

The admission procedure and evaluation are governed by the Uniform Rules for Doctoral Schools.

### **8.2. Quality control requirements for doctoral training**

At least every three years, the DIT reviews the list of compulsory and optional subjects, their themes and credit values.

The announced subjects are based on the university's training, but their content is highly scientific in demand, and the theoretical procedures and their application to research activities are more prevalent in their content.

The lecturer of the subject will submit to the DIT a proposal of approximately 2-3 pages for each of the announced subjects, and should include:

- the subject matter and detailed time structure,
- - bibliography,
- - the methodology of its presentation,
- - the methods and techniques of examination (the course descriptions are available at [mtdi.szie.hu](http://mtdi.szie.hu)).

The teaching methodology of the subjects should promote:

- the establishment of a direct teacher-student relationship,
- - a systemic approach to problem perception and problem solving
- - the development of the doctoral student's debating and expressive skills
- - the development of a critical vision,
- - the simultaneous acquisition of a comprehensive knowledge and a mastery of detail,
- - high standards of accountability.

The performance of the academic activity required for the complex exam will be marked by the KÉB on the basis of the criteria set.

### **8.3. Quality control requirements for degree acquisition**

In the doctoral complex examination, the doctoral candidate shall demonstrate the overall level of knowledge of science and its application in the subject he/she has studied.

The doctoral thesis book must contain new scientific results.

The Pilot Debate should be conducted in front of a panel of external and internal experts, with no time limit. The Doctoral School Council (DIT) may invite only recognised experts in the field to serve on the committees.

### **8.4. Quality control requirements for habilitation**

The following addendum is attached to section 6§ (3) h of the University Habilitation Regulations:

The MTDI will issue an acceptance statement if the applicant has obtained a PhD degree in the MTDI's discipline at least five years prior to the submission of the application and is actively engaged in higher education. The MTDI will assess the habilitation application submitted to it within three months.

The basis of the scientific metric evaluation in the submitted application is:

- At least 50% of the requirements for the title of Doctor of MTA, as formulated by the Scientific Committee for Agricultural and Biotechnical Sciences, Section IV, Agricultural Sciences,

or, in accordance with the researcher's professional activity,

- at least 50% of the requirements for the title of Doctor of MTA as formulated by one of the Scientific Committees of the Technical Sciences (Section VI).

The basis for the decision of the discipline is the professional Q classification of the publications in the MTMT database.

## 9.Accountability system of the Doctoral School

### *Training*

(Maximum number of credits available: 40)

- In order to meet the training requirements, the courses taken (32 credits) must be completed by 31 January or 31 August, depending on the semester. Anyone who fails to complete a course that has been enrolled in will be cancelled and will be able to repeat it.
- The teaching activity (4 x 2 = 8 credits) must also be certified by 1 March or 1 September. The certificate is issued by the head of the department in-house or by the director general (dean) at an external institution. The teaching activity is registered in Neptun by the leader of KÉB. Those who do not complete the teaching activity or do not provide a certificate can only make up the missing credits by publications.

### *Research*

(Maximum score: 52 credits)

Abstracts and summaries (literature review, research report) must be completed within the prescribed time.

#### *a. Workplan* (3-4 credits)

- • the qualification is given by the final evaluation of the 1st PC (December, 1st semester), before which the subject coordinator evaluates the submitted material separately for the committee;
- the grading committee may return the work for correction if it is less than 3 credits;
- lost credits may be made up by additional publications.

#### *b. Literature review* (18 credits, minimum 10 credits to be achieved)

- The grade will be determined by the final evaluation of the PC 2 (March, 2nd semester), prior to which the field coordinator will evaluate the submitted material separately for the committee;
- the grading committee may return the work for correction if it is less than 10 credits;
- lost credits may be made up by additional publications.

#### *c. Progress Control* (PC 3) (3-4 credits)

- the qualification is given by the final evaluation of the 3rd PC (June 2nd semester);
- the grading committee may return the work for correction if it is less than 3 credits;
- the credits lost may be made up by additional publications.

#### *d. Research report* (PC 4) (10- 14 credits, minimum 10 credits to be achieved)

- to be graded by a committee set up for this purpose (December – January, 3rd semester);
- the credits lost may be made up by additional publications.

e. *1<sup>st</sup> Final Research report* (10-12 credits, minimum 10 credits to be achieved)

- to be graded by a committee set up for this purpose (June, 4<sup>th</sup> semester, at least 2 weeks earlier as the complex exam);
- the credits lost may be made up by additional publications.

c. *Research activity in the dissertation phase*

- In the dissertation phase, 15 credits per semester may be awarded for research activity. 5 credits may be awarded by the supervisor, 8-10 credits may be awarded on the basis of the evaluation of the PC reports.

*Publications*

- students who do not complete the publication activity in the required semester may make up the publication activity until the end of the training research phase;
- the number of publication credits in the training phase is three times the number of publication points, with a minimum of 28 and a maximum of 50 credits;
- in the dissertation phase, the number of publication credits is twice the number of publication scores, of which an average of 15 credits per semester;
- the grade is submitted by the field coordinator to the DIT for decision;
- the candidate must have at least three national and two foreign peer-reviewed journal articles (at least 2 out of 5 must be impact factor or Q1 or Q2 rated journals) within the minimum publication score - *the impact factor is checked by the Web of Science JCR database (<https://jcr.clarivate.com>) while the qualification Q1 or Q2 by the Scopus SJR database (<https://www.scimagojr.com>).*

## 10. Financial management of the Doctoral School of Mechanical Engineering

Financial management practices of the MTDI:

- the amount allocated to the common costs of the MTDI is determined by the MTDI's core members;
- the financial envelope to be used in a given year is communicated by the Head of the MTDI to the supervisor, which is charged by relevant cost of the general operation of MTDI.
- The supervisor and the doctoral student shall prepare a financial plan for the use of the annual budget. Approximately 1/3 of the available budget may be used for accumulation, 1/3 for material expenses and the remaining 1/3 for publication expenses, conference participation or study visits. Participation in conferences and study trips in year I is only allowed in exceptional cases.
- the doctoral candidate may use the funds available only with the agreement of the supervisor,
- The procedure for using the budget is regulated by the MATE electronic system.

# ATTACHMENTS

## Attachment 1

### Personal background of the organizational structure of the Doctoral School

Head of the Doctoral School:

Dr. Gábor Kalácska, professor, DSc

School Leadership Council:

Dr. István Farkas, professor emeritus, DSc

Dr. Péter Szendrő, professor emeritus, DSc

Secretary:

Dr. habil István Seres, associate professor

Administrator:

Sivataginé Fekete Katalin

Doctoral School Council (18 persons)

Core members (9+1 emeritus):

Dr. László Fenyvesi, professor, PhD,

Dr. Gábor Kalácska, professor, DSc,

Dr. László Kátai, professor, PhD,

Dr. István Keppler, professor, PhD

Dr. Péter Kiss, professor, PhD,

Dr. habil István Oldal István, associate professor, PhD,

Dr. habil István Seres, associate professor, PhD,

Dr. István Szabó, professor, PhD,

Dr. Péter Szendrő, professor emeritus, DSc

Dr. habil László Zsidai, associate professor, PhD

Elected council members:

MATE (5 persons):

Dr. János Beke, professor emeritus, DSc

Dr. István Farkas, professor emeritus, DSc

Dr. István Husti, professor emeritus, DSc

Dr. László Tóth, professor emeritus, DSc

1 PhD student

Council members from other Institutes (3 persons):

Dr. Gábor Keszthelyi-Szabó, professor, DSc

Dr. Rita Kiss, professor, DSc

Dr. Zoltán Bedő, member of the Hungarian Academy of Sciences

Members of the College Emeritus

Dr. István Barótfi

Dr. Dezső Faust

Dr. László Jánosi

Dr. Ferenc Kaifás

Dr. Sándor Molnár

Dr. István Patay

Dr. István Pálinkás

Dr. Zoltán Peszeki

Dr. Lajos Pék  
Dr. Péter Sembery  
Dr. Zoltán Varga

Educational Committee (KÉB):  
Dr. István Keppler, chairman  
Dr. István Seres  
1 PhD student

Quality Committee (MIB)  
Dr. István Farkas, chairman  
Dr. István Oldal  
1 PhD student

Research Monitoring Committee (KEB)  
Dr. Gábor Kalácska, chairman  
School leadership council  
supervisors  
field coordinators

Habilitation Committee (HAB)  
Dr. László Kátai, chairman  
Dr. László Fenyvesi  
Dr. Péter Kiss



Curriculum - Doctoral School of Mechanical Engineering					
I. year		1. semester	I. year		2. semester
subject	hour	credit	subject	hour	credit
	sem			sem	
Planning of experiments	30	4	Theory and practice of engineering research	30	4
General Research Methodology	30	4	Measurement technology	30	4
Modelling and simulation	30	4	Researcher's Ethic	30	4
Education	30	2	Literature review (PC 2)	-	10-18
PC 1 (Workplan)		3-4	Education	30	2
			Progress Control (PC 3)		3-4
Total credits:		<b>18</b>	Total credits:		<b>36</b>
II. year		3. semester	II. year		4. semester
subject	hour	credit	subject	hour	credit
	sem			sem	
Elective subject	30	4	1st Final Research report	-	10-12
Elective subject	30	4	Education	30	2
Education	30	2	Publication		8
Publication	-	20			
Research report (PC 4)		10-14			
Total credits:		<b>44</b>	Total credits:		<b>22</b>
Subjects:					32
Education:					8
Research:					52
Publication:					28
<b>Total credits during the first two years:</b>					<b>120</b>
III. year		5. semester	III. year		6. semester
Research	5		Research	5	
Progress Control (PC 5)	8-10		Progress Control (PC 7)	8-10	
Publication	15		Publication	15	
Total	30		Total	30	
IV. year		7. semester	IV. year		8. semester
Research	5		Research	5	
Progress Control (PC 6)	8-10		Progress Control (PC 8, 2nd final reserach report)	8-10	
Publication	15		Publication	25	
Total	30		Total	30	
<b>Total credits during the dissertation part (second 2 years):</b>					<b>120</b>
<b>Total credits</b>					<b>240</b>

<b>Doctoral School of Mechanical Engineering</b> Curriculum from 2022	
subject	Lecturer
<b>Compulsory subjects (4 credits)</b>	
Modelling and simulation	István Farkas, DSc professor
General Research Methodology	Gábor Kalácska, DSc professor
Theory and practice of engineering research	Rita Kiss DSc professor
Planning of experiments	István Oldal , PhD associate professor
Measurement technology	István Seres, PhD associate professor
Researcher's Ethic	István Szabó, PhD professor
<b>Elective subjects (4 credits)</b>	
Heat and mass transfer	János Beke, DSc prof emeritus
Environmental Techniques	Gábor Gécz , PhD, associate professor
Mechatronical systems	László Jánosi, CSc prof. emeritus
Material Science	Gábor Kalácska, DSc professor
Mechanical analysis of machinery	László Kátai, PhD associate professor
Classical mechanics	István Keppler, PhD professor
Terrain vehicle dynamics	Péter Kiss, PhD professor
Electricity management	Péter Sembery, CSc professor emeritus
Differential equations	László Székely, PhD associate professor
Wind and geothermal energy utilizaion	László Tóth, DSc prof. emeritus

## Determination of the publication points

1. Publications and citations		Number of publications	Weight factor	Number x weight factor
Journal articles	IF or Q1 or Q2 journal publications		15	
	Publications in English		10	
	Reviewed publication in Hungarian		5	
	Other Hungarian scientific publication		2	
	Other English scientific publication		2	
Conference proceedings	International conference proceedings		5	
	Hungarian conference proceedings		3	
	International conference abstract		2	
	Hungarian conference abstract		1	
Electric publications and databases	English, reviewed		3	
	Hungarian, reviewed		2	
Book, chapter, editorial activity	English book/Chapter		6 (3)/printed sheet	
	Hungarian book/Chapter		2 (1)/printed sheet	
	English editing activity		10	
	Hungarian editing activity		5	
Patent <sup>8)</sup>	Patent in Hungary		2	
	International patent		4	
Citation <sup>9)</sup>	Hungarian citation		2	
	International citation		5	
<b>1. Publication scores altogether:</b>				
<b>2. Specific creations <sup>(10) (11)</sup></b>				
Technological development, technological plan			2	
Documented technological development			3	
Software development			2	
<b>2. Creations altogether:</b>				
<b>3. Research activities</b>				
Leader of Hungarian scientific research project			3	
Participant of Hungarian scientific research project			1	
Leader of International scientific research project			5	
Participant of International scientific research project			1	
Leader of other International research project			2	
Leader of other Hungarian research project			1	
International expert			2	
<b>3. research activity altogether:</b>				
<b>4. Education of the young scientists</b>				
Head of a doctoral (PhD, DLA) School			5	
Officer of a doctoral (PhD, DLA) School			3	
Senior officer of a doctoral (Ph.D, DLA) School			4	
PhD or DLA supervisor: successfully completed			3	
during the process			1	
PhD opponent			1	
Students scientific research supervisor: finished report			0, 5	
among them prized			1	
<b>4. Altogether:</b>				
<b>5. Other scientific activity</b>				
Officer of a national professional committee			10	
Member of a national professional committee			2	

Member of a Hungarian editorial board		5	
Member of an International editorial board		10	
Officer of the organizing committee of a congress, conference		5	
Member of the organizing committee of a congress, conference		2	
Officer of a Hungarian scientific society		2	
Officer of an International scientific society		5	
Opponent of an academic doctoral process		1	
<b>5. Other scientific activities altogether:</b>			
<b>Publications and scientific activities altogether (1+2+3+4+5):</b>			

**Important remark:**

**In case of two or more authors the scores have to be divided with the number of the authors. In case of PhD students the supervisor has not to be taken in account during the division.**

**The publication points are converted to publication credits in the Neptun system. The number of publication credits in the training phase is three times the number of publication points, with a minimum of 28 and a maximum of 52 credits. In the dissertation phase, the number of publication credits is twice the number of publication scores, of which an average of 15 credits per semester;**

Remarks:

The starting point of the evaluation is the habitus test used in the procedure for obtaining the DSc title of the relevant Department of the Hungarian Academy of Sciences, which is based on the publication impact factor based on SCI and provides an internationally comparable evaluation as an objective measure. In addition, when compiling the evaluation system, we tried to develop a measurement method that is compatible with other fields of science.

- (1) Revised journal
  - has an editorial board.
  - has a summary in English
  - at least one written opinion made by a lector
- (2) *English, German, French, Russian, Spanish and Italian* shall be considered as world languages.
- (3) Articles published in the world language, revised, published in the Bulletin may also be included here.
- (4) The official language of an international conference is a world language in which at least one third of the speakers are foreign.
- (5) Proceeding: the fully published material of the conference presentation or poster was published in a publication with the ISBN or ISSN number of the conference and other evaluable publications. The abstract does not count as a conference publication.
- (6) The editorial board, proofreading, publisher, referral, and the keyword for finding an electronic publication are required.
- (7) A patent may be filed from the date on which it is published or its utilization begins. The utilized patent receives an extra point, the extent of which should be proportional to the extent of the references.
- (8) In patents, the weighting factor should be taken into account on the basis of the proportion of inventors. The division of the weight factor among the co-authors also applies to the profession-specific work (technological development, technical work, pharmacological test method, adaptation of new diagnostics, new healing procedure,

- educational methodological innovation, scientific and educational film, educational CD, software development).
- (9) Among the references, references published in print may be taken into account, a reference in a dissertation cannot be assessed as a reference. Self-reference, co-author's reference does not count.
  - (10) When listing profession-specific scientific works (eg technical works, in the case of a procedure), it is necessary to indicate their economic and / or social usefulness, their domestic and foreign distribution. Utilized profession-specific works will receive extra points, the amount of which should be proportional to the amount of references.
  - (11) Expert opinion is not a scientific activity. OM patronage and non-scientific applications cannot be accepted among the won applications.

**EVALUATION OF RESEARCH SCIENTIFIC ACTIVITY**

(based on Attachment 4)

<b>Point limits</b> <b>For home defence application</b> (see points available under appendix 4)	
<b>Type of scientific activity</b>	<b>points</b>
1. Publications and their references	
1.1. Publication	35 ill. 30 <sup>(1)</sup>
1.2. References	5 <sup>(1), (2)</sup>
1. Total (minimum)	40
2. Profession-specific works	
3. External research sources	
4. Education of the young scientific community	
5. Other scientific activity	
<b>1-5. Total (minimum)</b>	<b>60<sup>(3)</sup></b>

Remarks:

**Achieving a minimum of 60 points is a necessary condition for submission to a workplace debate.** An additional condition is that the publications include at least five peer-reviewed articles published in world languages (at least two of the five must have impact factor - according to the Web of Science JCR database (<https://jcr.clarivate.com>), or at least 2 pieces of Q1 or Q2 corresponding to the subject area according to the Scopus SJR database (<https://www.scimagojr.com>), which must be taken into account at the time of acceptance of the article. The doctoral student carries out a self-assessment according to Appendix 4, which is evaluated by the appointed reviewer (see Chapter 5): e.g. the admissibility of the listed publications, the publication of the same article in several places, resp. or judging the connection to the dissertation. The Subcommittee on Quality will then form an opinion on admissibility and submit it to the DI Council.

The figures indicated are minimum requirements for participants in individual degrees for judgments to be done, their documents must be submitted in an identifiable manner according to appendix 4.

Point limits in case of <b>application for habilitation</b>	
<b>Type of scientific activity</b>	<b>points (minimum)</b>
1. Publications and references	
1.1. Educational publication	30
1.2. References for 1.1.	5 <sup>(1)</sup>
1.3. Scientific publication	100
1.4. References for 1.3.	15 <sup>(1)</sup>
1. Publications and references total	150
2-5. Other scientific activities <sup>(2)</sup>	30
<b>1-5. Total</b>	<b>180</b>

Remarks:

Achieving a minimum of 180 points is a necessary condition for defense. A sufficient condition is given by the positive opinion of the two reviewers, which states the eligibility of the listed activities and their content value (eg admissibility of the listed publications, publication or inclusion of the same article in several places, or assessment of the connection to the dissertation, etc.). The complete documentation used for the scoring must be made available to the nominated judges. Based on these, the Doctoral School's Habilitation Committee formulates an opinion on admissibility and submits it to the DS Council.

The condition for habilitation is also the 50% fulfillment of the conditions of the academic doctoral degree established by the competent Department of the Hungarian Academy of Sciences..

References must be substantiated in a documented form (copy) as above.

# **ELECTRONICALLY AVAILABLE MATERIALS**

## **FORMS**

1. Doctoral topics recommended for publication
2. Institutional declaration of acceptance
3. Research work plan (in case of application)
4. Research work plan (for doctoral students)
5. Outline of the dissertation (in case of an individual degree holder)
6. Admission protocol
7. Certificate of the doctoral student's teaching activity
8. Literature review
9. Research report
10. Home defence request
11. Home defence invitation sample

The forms can be downloaded in electronic, editable form from <http://mtdi.szie.hu>.

The appendices issued by the University Doctoral and Habilitation Committee (Application form for doctoral training, application form for obtaining a degree, content and form requirements of the doctoral dissertation, etc.) can be downloaded from the DHT website: <https://archive.uni-mate.hu/en/phd/regulations>

## **DETAILED DESCRIPTION OF MTDI SUBJECTS**

A detailed description of the subjects can be downloaded from <http://mtdi.szie.hu>.