



**Training booklet  
for the PhD students  
of the**

**ANTAL KERPELY DOCTORAL SCHOOL OF  
MATERIALS SCIENCES AND TECHNOLOGY**

**University of Miskolc  
Faculty of Materials and Chemical Engineering**

**2025**

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Dear Student,

Firstly, congratulations on being accepted into the Doctoral School of the Faculty of Materials and Chemical Engineering. Several questions have been raised by you in connection with your PhD studies. We would like to give you answers in this information booklet.

In addition to the research work accepted by your supervisor there are some requirements that must be fulfilled parallel with your research work.

- You must hold a presentation about the results of your research at the end of each semester, and your chosen subjects must be finished with exams.
- For your research work, exams, publications, etc. you get credits: at least **240 points** must be collected by the end of the PhD studies.
- Within the credits earned, the condition for admission to the defense is that the Student has two articles in prestigious journal listed as the first author, one of which has a minimum Q2 rating.

The PhD students can also participate in a short mobility program (5-60 days) to gain research experience abroad (in Europe).

The academic requirements are described in detail in the following pages.

## 1. Brief description of the PhD studies

### 1.1. Training plan of the Doctoral School

Semester	Education and research section (E+R)				Research and dissertation section (R+D)				Total
	1.	2.	3.	4.	5.	6.	7.	8.	
<b>Number of compulsory subjects</b>	min.1- max.2	min.1- max.2	min.1- max.2	-	-	-	-	-	<b>4/5</b>
<b>Art of doing science for 2 credits</b>	1	-	-	-	-	-	-	-	<b>1</b>
<b>Scientific database management for 2 credits</b>		1							<b>1</b>
<b>Credits/subject</b>	10	10	10	-	-	-	-	-	<b>42/52</b>
<b>Credits for complex exam</b>	-	-	-	25	-	-	-	-	<b>25</b>
<b>Number of research seminars</b>	1	1	1	-	1	1	1	1*	<b>6/7</b>
<b>Credits for research seminars</b>	15	15	15	-	20	20	20	20*	<b>45+ 60 (80)</b>
<b>Optional subjects</b>	max.2	max.2	max.2		-	-	-	-	<b>0-6</b>
<b>Credits for optional subjects</b>	2	2	2		-	-	-	-	<b>max. 12</b>
<b>Credits for publications</b>	min. 10 credits				min. 45 credits				<b>min. 55</b>
<b>Participation in research work of the department</b>	2	2	2	-	5	5	5	5	<b>max. 26</b>
<b>Educational activity hours per week</b>	max. 4	max. 4	max. 4	-	max 4	max 4	max 4	-	<b>max. 24</b>
<b>Credits for educational activity credit/hour</b>	5	5	5	-	5	5	5	-	<b>max. 30</b>
<b>Short mobility (5-60 days in Europe)</b>	5	5	5	5	5	5	5	5	

\*the 7th research seminar (and its credits) can be substituted by the pre-defense

## 2. The tasks of PhD students

<b>Education and Research section (E+R)</b>	<b>TASKS – 1st semester</b>
	<ul style="list-style-type: none"> <li>• Enrollment for 1st semester</li> <li>• Preparation of work and study plan</li> <li>• Registration for subjects in NEPTUN (it is done by the staff of the Dean’s Office based an the approved workplan)</li> <li>• Fulfillement of subjects</li> <li>• Fulfillment of „Art of Doing Science” subject</li> <li>• Presentation at the research seminar</li> <li>• Semester closing – Preparing the semester report on the given form in SharePoint Excel file</li> </ul>
	<b>TASKS – 2nd semester</b>
	<ul style="list-style-type: none"> <li>• Enrollment for the 2nd semester</li> <li>• Registration for subjects in NEPTUN (it is done by the staff of the Dean’s Office based an the approved workplan)</li> <li>• Fulfillement of subjects</li> <li>• Fulfillment of „Scientific Data management” subject</li> <li>• Presentation at the research seminar</li> <li>• Semester closing – Preparing the semester report on the given form in SharePoint Excel file</li> </ul>
<b>Research and Disserttion section (R+D)</b>	<b>TASKS – 3rd semester</b>
	<ul style="list-style-type: none"> <li>• Enrollment for the 3rd semester</li> <li>• Registration for subjects in NEPTUN (it is done by the staff of the Dean’s Office based an the approved workplan)</li> <li>• Fulfillement of subjects</li> <li>• Presentation at the research seminar</li> <li>• Semester closing – Preparing the semester report on the given form in SharePoint Excel file</li> </ul>
	<b>TASKS – 4th semester</b>
	<ul style="list-style-type: none"> <li>• Enrollment for the 4th semester</li> <li>• Fulfillment of minimum credits to the application for Complex Exam (at least 10 credits from publication)</li> <li>• Fulfillment of Complex Exam</li> <li>• Semester closing – Preparing the semester report on the given form in SharePoint Excel file</li> </ul>
<b>Research and Disserttion section (R+D)</b>	<b>TASKS – 5th semester</b>
	<ul style="list-style-type: none"> <li>• Enrollment for the 5th semester</li> <li>• Presentation at the research seminar</li> <li>• Semester closing – Preparing the semester report on the given form in SharePoint Excel file</li> </ul>
	<b>TASKS – 6th semester</b>
<b>Research and Disserttion section (R+D)</b>	<ul style="list-style-type: none"> <li>• Enrollment for the 6th semester</li> <li>• Presentation at the research seminar</li> <li>• Semester closing – Preparing the semester report on the given form in SharePoint Excel file</li> </ul>
	<b>TASKS – 7th semester</b>
<b>Research and Disserttion section (R+D)</b>	<ul style="list-style-type: none"> <li>• Enrollment for the 6th semester</li> </ul>

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	<ul style="list-style-type: none"> <li>• Presentation at the research seminar</li> <li>• Semester closing – Preparing the semester report on the given form in SharePoint Excel file</li> </ul>
	<p><b>TASKS – 8th semester</b></p> <ul style="list-style-type: none"> <li>• Enrollment for 8th semester</li> <li>• Presentation at the research seminar which can be replaced by the pre-defense</li> <li>• Semester closing – Preparing the semester report on the given form in SharePoint Excel file</li> <li>• Request for absolutorium (a certificate about the fulfilled total credits)</li> </ul>
	<p><b>Pre-defense =&gt; Starting the doctoral procedure =&gt; Public defense</b></p>

### 3. First steps

- PhD students are required to enroll in the NEPTUN System, which is a unified information system of study.
- There will be an information meeting at the beginning of the semester, where Agnes Solczi and Eva Stumpf can help with NEPTUN system log in and enrollment.
- Before the electronic enrollment, the form below must be completed and send back to the Dean’s Office electronically and must be handed in to Agnes Solczi.

UNIVERSITY OF MISKOLC		20...../...../11	semester	1.	year of studies
OM identification: F187515					
FACULTY OF MATERIALS AND CHEMICAL ENGINEERING		Type of course (full time, correspondence, individual)*			
Antal Kerpely Doctoral School of Materials Science & Technology					
<b>REGISTRATION FORM for doctoral (PhD) training</b>					
Name (surname, given name, as it is in the passport):				Mother's name:	
student ID (Neptun code):				Passport No:	
Place and date of birth:					
Nationality:					
Permanent address at home (in your country):					
Type of residence permit:					
Name of residence certificate:				Number:	
Current postal address:					
Mobile phone number:		E-mail:			
Hungarian Bank name and account number:					
Highest degree earned:				Number of certificates	
Year and the issuing organization:					
Supervising Department:			Supervisor(s):		
PhD research topic:					
Tuition fee will be paid by:	check / bank transfer *				
Payer's name and address:					
I, the undersigned PhD student, declare that I received the Training Booklet for PhD Students and that I have read and understood its contents.					
Miskolc,	year:	month:	day:		
* underline your choice				Signature of PhD student	

## 4. Requirements

### 4.1. Research plan, timing of studies

- At the beginning of the first semester, each PhD student is required to prepare a **research plan** briefly describing the planned research work and explaining how the parts of the research build on each other.
- It is also required to prepare a study plan in parallel with the research plan.
- In the workplan, it is also necessary to create a publication schedule in order to obtain the required minimum of 10 publication credits by the end of the 4th semester.
- Both the research plan, the study plan and also the research seminar report is valid only with the acceptance and signature of your supervisor. The accepted plan of research and study plan, including postponing an exam to another semester, are modifiable only with the approval of the Council of the Doctoral School.
- The PhD student is required to write a report about the completed credits on a form with the approval of the supervisor each semester. It has to be submitted in 1 printed and signed copy and electronically no later than 28 January/June.
- In each semester, the student must complete a minimum of one and maximum of two subjects, in order to complete the required four subjects and the “Art of doing science” subject (compulsory course in the 1<sup>st</sup> semester) and the “Scientific database management” (compulsory course in the 2<sup>nd</sup> semester) till the end of Semester 3.

### 4.2. Complex examination, continuation of study

- It is required at the end of the second year that PhD students finish their previous studies with a complex exam.
- The complex exam can be started by a PhD student who has obtained at least 90 credits, including at least 10 credits for publications. This means completing all subject credits and research seminar presentations (44 subjects, 45 research seminar presentations, 10 publications).
- The complex exam must be taken in public before a committee. This exam consists of two main parts, a theoretical section and a dissertation section. The complex exam consists of a written and an oral section. The subjects for the complex exam will be recommended by the supervisor and approved by the Council of the Doctoral School.

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- *Theoretical section:* the PhD student takes an exam over his/her theoretical and professional knowledge and applicability of acquired knowledge based on two subjects. The Training plan of the Doctoral School contains the questions for the complex exam by subject.
- *Dissertation section:* the PhD student must hold a presentation about his/her knowledge of the literature and about the obtained results in research; and must reveal his/her research plan for the second two years of studies, with timing of the planned publication activities and writing of the dissertation.
- The scientific research report and plan must be presented by PhD student orally and in writing. The written presentation must be submitted at least two weeks before the exam.
- The complex exam is successful, if the candidate performs a minimum 60% in each part.
- After successful completion of the complex exam, PhD student can continue his/her studies.
- A failed theoretical section of the complex exam can be repeated once more in the same exam period.
- If the dissertation section is failed, the PhD student must apply for the complex exam again in the following semester. If the exam is successful after this second exam, the student can continue his/her studies, but only in the self-financing program.
- If the doctoral student does not pass the complex exam, his/her student status will be terminated on the day of failure.

### 4.3. Research and Presentation

- The PhD student is required to carry out research work, the results of which must be presented within a Research seminar at the end of each semester. The research report is 20-30 pages long, which must be submitted in the last month of the exam period - based on the information provided in each semester - in 1 printed, signed copy, and electronically.
- In the first semester the PhD students have the opportunity to prepare this seminar report in the form of a literature overview, which specifies the research direction.
- The research seminar can only be submitted with the signature of supervisor and can be presented only if it receives a positive (over 60%) review.

## 5. Publication Activities

It is required for the PhD defense to publish two papers in prestigious journals. The list of these journals is approved by the Council of Doctoral School. For information purposes the list of journals with Impact Factor (IF) can be found at:

<http://www.citefactor.org/journal-impact-factor-list-2014.html>

Conferences in Hungary

- MicroCAD (at the University of Miskolc, held annually)  
<http://www.uni-miskolc.hu/~microcad/>
- OATK (held every two years at Lake Balaton) <http://oatk.hu/>
- Interdisciplinary Sciences Doctoral Conference.
- Paper publication

## Opportunities for Literature Research

- Central Library: in person or at <http://www.lib.uni-miskolc.hu/web/konyvtar/>
- You can find papers on the site [www.sciencedirect.com](http://www.sciencedirect.com) or [link.springer.com](http://link.springer.com), within the university network, with free full-text downloading,
- Free download of some papers at <https://scholar.google.com>,
- You can find papers on the site [www.scopus.com](http://www.scopus.com), within the university network, with free downloading,

It is recommended to register on the site [www.researchgate.net](http://www.researchgate.net), where you can also download papers freely (and make yours available).

## Credits in the Antal Kerpely Doctoral School of Materials Science and Technology

Items	Credits	
Obligatory <b>courses</b> (4 of them):	10 each	
<b>Art of Doing Science</b> course	2	
<b>Scientific database management</b> course	2	
<b>Research Seminar</b> in the 1 <sup>st</sup> 4 semesters, 3 is needed for the complex exam	15 each	
Research Seminar in the 2 <sup>nd</sup> 4 semesters, at least 3, maximum 4	20 each	
<b>Teaching</b> activities – need to enclose the proof of the lecturer	5	
Participate in <b>research work</b> of the institute, enclose the report of the executed tests	during the 1 <sup>st</sup> 4 semester	2
	during the 2 <sup>nd</sup> 4 semester	5
<b>Publications*</b> – enclose copy of the submitted article or programs of the conference		
prestigious international journal		
- publication in Q1 ranked journal	40	
- publication in Q2 ranked journal	30	
- publication in Q3 ranked journal	20	
- publication in Q4 ranked journal	10	
Reviewed article published in non Q ranking journal	6	
Hungarian journal, but not in Hungarian	6	
Hungarian journal in Hungarian	4	
International conference article not in Hungarian	5	
International conference presentation (oral or poster) not in Hungarian	4	
Hungarian conference article not in Hungarian	3	
Hungarian conference presentation (oral or poster) not in Hungarian	2	
Hungarian conference article in Hungarian	2	
Hungarian conference presentation (oral or poster) in Hungarian	2	
<p>* Only those articles can be rewarded with credits which have been already accepted and published, can be seen either in electronic or in printed version and the Student is the <b>first author</b>.                      The articles must be at least 4 printed pages and have to be divided into introduction, experiments, results, conclusion and list of literatures.                      From this year you can get 2 credits for research co-operation max. 2-times per semesters when you are a co-author.</p>		
<b>Patent</b>		
Registered patent	10	
Submitted patent	4	

Compiled by Dr. Peter Baumli, Dr. Mária Svéda

Approved by the Council of the

**Antal Kerpely Doctoral School of Materials Sciences and Technology  
at the University of Miskolc**

## Who can help you...?



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Neptun, student ID  
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**Dr. Péter Baumli**  
general academic affairs  
Building C/1, 1<sup>st</sup> floor, Room 106



**Dr. Mária Svéda**  
general academic affairs  
Building C/1, Room 102



**Ms. Éva Stumpf**  
Neptun system, registration  
Building C/1, 1<sup>st</sup> floor, Room 107



**Ms. Ágnes Solczi**  
general academic affairs  
Building C/1, 1<sup>st</sup> floor, Room 107

Mentors  
Supervisors