

# Doctoral School of Earth Sciences, University of Debrecen Operational Rules

(The rules apply for students starting their studies after September 2016.)

(Last modified 1 January 2024.)

<i>Head of Doctoral School:</i>	<b>Dr. Gábor Kozma</b> , professor, DSc
<i>Deputy Head of Doctoral School:</i>	<b>Dr. Szilárd Szabó</b> , professor, DSc
<i>Secretary of Doctoral School:</i>	<b>Dr. György Szabó</b> , professor

## 1. Doctoral School programs

<i>Name of program</i>	<i>Program leader</i>
Landscape protection and climate	<b>Dr. Péter Csorba</b> , professor, DSc
Sustainable energetics sub-program	<b>Dr. Ferenc Kalmár</b> , professor, DSc
Natural and anthropogenic processes of lithosphere and hydrosphere	<b>Dr. Szilárd Szabó</b> , professor, DSc
Social geography – regional development	<b>Dr. Gábor Kozma</b> , professor, DSc

**Research fields covered by the programs of the doctoral school:** environmental protection, landscape protection, environmental energetics, climatology, physical geography, geoinformatics, geology, hydrogeology, geophysics, social geography, regional development, tourism.

Programs have independency within the doctoral school to organize their scientific and educational activities but every course of the doctoral school is open for all PhD students: i.e. both full-time and corresponding students can apply for all registered courses and the teachers of the course have to admit them. In this way, Programs are interoperable.

PhD students also have access to the infrastructure – within the given financial limits – required for their topic. Within the programs the program leader coordinates laboratory usage. Using infrastructure beyond the programs can be realized based on the reconciliation of program leaders and supervisors. Contribution to the operational costs of laboratory usage is organized on the basis of “first cost repayment” principle for which primarily state support resources are used.

## 2. Council of the Doctoral School

The voting members of the Council of the Doctoral School are the leaders of the doctoral school programmes, the core members of the Doctoral School and up to 2 senior lecturers elected by the core members for a period of 3 years. The 1 PhD student (elected by the PhD students themselves) and the emeritus members of the School's core members participate in the work of the Council of the Doctoral School with the right to deliberate.

The head of the Doctoral School is elected by the University Doctoral Council from among the members of the Doctoral School's professorial staff, on the recommendation of the majority of the members of the staff, after consulting the Doctoral Council for the discipline, and appointed by the Rector for a maximum term of five years.

The Secretary and the Deputy Head of the Doctoral School shall be proposed by the Head.

### Tasks and rights of the council of the doctoral school:

- preparations for PhD admission exam,
- recommendation for the composition of the admission committee,
- setting up the admission ranking based on the performance of the candidates,
- consenting theoretical and seminar curricula,
- registering courses in Neptun (determining credits),
- prescribing credit point topics, ratio (student/supervisor limit),
- consenting the educational tasks of PhD students,
- measures regarding partial training in abroad,
- consultation, giving advice, etc.,
- recommendation for the composition of the complex exam board and that of the doctoral defence committee and also for the exam subjects for those applying for a complex exam,
- consenting the committee for the preliminary defence,
- accepting application for the comprehensive exam, discussion of the recommendation for the composition of the comprehensive exam board,
- accepting application for the open PhD defence, discussing the composition of the open defence committee, organization of PhD comprehensive exam and open defence with the participation of the candidate,
- giving an opinion on the suitability of the candidate based on his/her scientific performance,
- organizing the reporting of PhD students regarding their results in their research,
- procedures in habilitation issues based on the habilitation rules.

*Tasks of the secretary of the doctoral school:*

Administrative tasks of the doctoral school are covered by the **secretary of the doctoral school**. The secretary of the doctoral school is commissioned by the head of the doctoral school and may receive remuneration for the performed work.

- Performing the administrative and registry obligations of the doctoral school;
- Secretary works for the doctoral school council;
- Organizing the meetings of the council of the Doctoral School of Earth Sciences;
- Takes part in the meetings (with discussion rights) of the Doctoral School of Earth Sciences Council (DSESC) and takes responsibility of preparing a reminder of the meeting together with the head of the Doctoral School of Earth Sciences (DSES) within 10 working days after the meeting;
- Monitors the deadline of the regular obligations of the DSESC (admission, preliminary defence, appointment of comprehensive exam and open defence committee, calling attention for the submission of the annual report of PhD students, etc.) and initiates the taking of the particular measures in time;
- in co-operation with the head of DSES organizes performing accreditation tasks in time;
- keeps contact with the secretary and administrator of the Doctoral Council of Natural and Computational Sciences (DCNCS);
- performs all tasks given by the head of DSES in relation to the doctoral training or given by the doctoral regulations of the University of Debrecen and/or that of the Natural Sciences Doctoral Council;
- regular actualization of the data and documents of the doctoral school in the database of the National Doctoral Council ([www.doktori.hu](http://www.doktori.hu)): inclusion or deletion of academic staff, supervisors and core members corresponding to the decisions of the authoritative boards, publication of registered topics, publication of open doctoral defence, etc.;
- updates the webpage of the DSES (preliminary defence, comprehensive exams and open defences);
- takes care of the notice board of the DSES.

*Tasks of the administrator of the doctoral school:*

- The primary task of the administrator is to complete the administrative and registry obligations of the doctoral school based on directions from the head of the DSES.
- Handles the accounts of the DSES and the registry of the financial resources of the DSES together with the head of the DSES.
- Based on the directions received from the head of the DSES prepares the documents for the division and bank transfer of the doctoral training support;
- Keeps contact with the administrator of the Doctoral Council of Natural and Computational Sciences;

- Covers all tasks given to him/her by the head of DSES in relation to the operation of the Doctoral School.
- With consent from who would be concerned he/she carries out a record of the already graduated.

*Tasks of the education administration of the Doctoral School.*

- Carries out educational administration;
- Carries out educational administrative tasks in Neptun;
- Is responsible for the inclusion of doctoral courses at the start of each year;
- Registry of the curricula, courses and topics have to be updated together with the head of the DSES in co-operation with the head of DSES keeping the above updated both on paper and in Neptun System as well.

### **3. Doctoral school budget**

*Income of doctoral school*

- training support for PhD students on state supported training, (including Hungarians coming from over the border),
- tuition fee of foreign students in the doctoral training,
- tuition fee of correspondence course students in doctoral training,
- income from joint tenders.

The above income is registered on a separate account of the Doctoral School of Earth Sciences. The head of the school has primary responsibility for its appropriate use. The head of the school and – in case of his/her absence – the deputy head has signatory rights. The head of the doctoral school reports on the financial conditions of the school to the council on a regular basis.

Income of the doctoral school is divided based on the following principles.

A sum of money determined by the council is separated for the joint expenses of the doctoral school (cost of external teachers, maintenance and repair costs of the pickup car of the doctoral school, etc.) in each year.

Doctoral programs share the income based on the number of their students in state supported training or correspondence course supported by the doctoral school.

(The number of correspondence course students supported by the doctoral school is the same as that of the state supported students. If a given program is willing to finance more correspondence course students and those students were successful at their admission interview the number of correspondence course students may exceed that of the state supported students.)

## 4. Applying for training in the doctoral school

Applying is possible for three types of training in the doctoral school: 1. full-time, 2. correspondence course, 3. individual training.

Students admitted to correspondence training or individual training have to pay a tuition fee as follows:

From 01/09/2016: 6500 USD/year

Full time and correspondence training takes eight semesters (48 months) composed of a training and research (24 months), and research and dissertation (24 months) phases. Individual preparation means the completion of only the research and dissertation (24 months) phase.

The goal of individual training is to enable professionals having a diploma and qualification obtained at a national or foreign university at Master level (or documentation certifying equivalent higher education qualification) or appropriate practice, significant academic and/or research practice, or documented publication activity (adequate number and quality of publications) to obtain a doctoral (PhD) certificate. Obtaining PhD via individual training is possible only in specifically justified cases. Upon accepting the application, the student becomes a paying student and the doctoral school council of the appropriate disciplinary area identifies the board and subjects of the complex exam. The student in individual training has to complete the complex exam in the exam term following his/her admittance to the training.

Admission to a training is decided on the basis of an admission exam the condition and process of which are regulated by the doctoral regulations of the disciplinary area.

Apart from the above, specifics regarding the admission exam in the case of the Doctoral School of Earth Sciences are the following:

Application will only be considered if the higher education qualification or – in the case of those graduated earlier – scientific activity of the applicant is associated with earth sciences.

Language skills of the applicants is only assessed during the admission procedure regarding its suitability to the specifications of the legal requirement. Extra points cannot be obtained regarding language skills.

The maximum points in the course of the admission exam are the following:

Professional intelligence:	40 points
Result of the diploma:	30 points
Scientific activity:	30 points

The admission exam is supervised by the admission examination board appointed by the doctoral school council and approved by the doctoral council of the disciplinary area among the members of which one invigilator appointed from a different disciplinary area has to be present.

## 5. Prerequisites of obtaining the degree

### 5.1 Credits to be obtained during the doctoral training (prerequisites of obtaining a pre-degree certificate)

The total amount of credits to be obtained over the 4 years is 240, i.e. 30 credits per semester on average. A minimum of 27 credits have to be obtained to have the semester accepted, however, more credits than 33 cannot be obtained. PhD students may lead practical classes but no credits can be given for this activity. To avoid the overloading of PhD students the lead classes are maximised in 6 hours.

Credit points can be obtained based on study results and research activities as follows.

#### Study results

A minimum of 16 credits have to be obtained over the first four semesters and the maximum can be 20 credits. The recommended number of courses in the first four semesters is 2 with 4 credits for the two courses. In semesters 5-8 no study credits can be obtained.

#### Research activity

A maximum of 224 credits can be obtained over the eight semesters. Research activity is awarded by a maximum of 26 credits per semester in the first four semesters while a maximum of 30 credits can be obtained in semesters 5-8. (1 credit can be obtained with 30 working hours.) Credits can be given to the following activities:

- *publication* – relevant publications and scientific activities are given in Table 1;
  - *presentation given at international and national conferences*;
  - *poster presentation at international and national conferences*;
  - *fieldwork*;
  - *research work outside the university* (questionnaire survey, interviewing, data collection);
  - *laboratory work*;
  - *documented analysis of literature* (giving a report of the analysed literature sources);
- departmental research report* (presentation of the achieved research results in 40-50 minutes).

Table 1. Publication and scientific activities that can be considered as scientific performance

<b>Publications, scientific activities</b>
In journals with impact factor
In foreign peer reviewed journals
In national, peer reviewed journals, publication in foreign language
In a national journal in Hungarian
In a regional scientific journal
In an edited volume (according to individual assessment)
In the proceedings of an international conference (complete study)
In the proceedings of a Hungarian conference (complete study)
Book, chapter
Lecture notes, chapter
Published map
Scientific information
Abstract in the publication of an international conference
Abstract in the publication of a national conference
Review
Final report of a research project
Peer review, refereeing
Educational material

Every PhD student is obliged to compose a report in writing on the achieved results. Apart from the above, a presentation on the performed activities and achieved results has to be given for the doctoral school council the academic staff of the doctoral school once a year, towards the end of the spring semester. The presentation is followed by a discussion and oral assessment.

## **5.2 Complex exam**

In the course of full-time and correspondence PhD training, a complex exam has to be passed as a closure of the training and research phase of the training and as a condition of entering the research and dissertation phase. This exam measures and assesses the progress in learning and research.

Students have to apply for the complex exam in writing (Appendix 4 of the Doctoral Rules of the University of Debrecen). Since the student enters into the degree awarding process following the successful complex exam, applying for the exam is also the application for the degree awarding process.

The complex exam is composed of two major parts: assessment of the theoretical knowledge of the student (“theory part”) and the assessment of the research progress (“dissertation part”).

In the theory part of the complex exam the students take the exam from at least two subjects/topics. The list of the subjects/topics can be found in Appendix 1 of the rules and the training programs of the doctoral school.

In the second part of the complex exam the student presents his/her knowledge of the relevant literature, reports on the research results and outlines the research plan for the second phase of the PhD training and a schedule for completing the dissertation and publishing the results.

The fifth semester of the training can only be started after a successful complex exam.

The final (after the preliminary defence) version of the dissertation has to be submitted within three years following the complex exam. This deadline can be extended by one year at the most upon the decision of the doctoral council of the disciplinary area in case the obligation of the student is impeded by child-birth, accident, disease or other unexpected reasons beyond his/her own fault.

## **5.3 Publication and language preconditions of the PhD degree**

### **5.3.1 Publication preconditions**

Minimum publication preconditions required in the Doctoral School of Earth Sciences are the following:

- at least two publications published (accepted for publication) in foreign, peer reviewed and indexed journals or edited volumes, *or*
- one publication published (accepted for publication) in a foreign peer reviewed and indexed journal or edited volume, and two publications published (accepted for publication) in national peer reviewed and indexed, foreign language journals.

Publications will not be considered that receive a rating of 0 in the Norwegian list of journals with objectionable practices on the MTMT website (<https://www.mtmt.hu/>) after 1 January 2024.

Apart from the journals indexed by Thomson Reuters (ISI) the journals of the following four further major indexing and abstracting centres – that require peer review quality from the journals – can be accepted:

1. Scopus
2. EBSCO
3. ProQuest
4. GeoRef

Indexing and abstracting by the above services are not automatic, journals are evaluated from several aspects (regular publication, peer review, editorial board,



international character of papers, etc.). This registering of the journals makes the “indexed” status controllable.

In case the given publication is indexed in neither of the above services, it cannot be accepted as a publication in the degree awarding process. The student has to prove that his/her publications are eligible when applying for the process (print out the name of the journal with the name of the indexing service and the URL of the publication).

### **5.3.2. Language prerequisites**

The language skills of students applying for a foreign language course are checked during the admission interview.

Students on foreign language courses study and take examinations in English, which is the language in which they have the language skills needed to obtain a degree.

## **5.4. Preliminary defence of dissertation**

Before applying for the open defence of the PhD thesis the completed but not finalized version of the dissertation has to be assessed preliminary. The assessment committee at the preliminary defence is composed of a chairman, two referees (opponents) and a secretary. They are entitled to decide whether or not the PhD dissertation manuscript is suitable to initiate the degree awarding process. A report on the assessment discussion is required. Referees may be the opponents at the open defence as well. The report on the preliminary defence has to be handed over to the head of the doctoral school at the time of applying for the open defence. Rules regarding the preliminary defence are specified in Appendix 2.

## **6. Assessment procedure, the open dispute of the dissertation**

Further details of the procedure can be found in the doctoral rules of the disciplinary area.

# Appendix 1

## Doctoral School of Earth Sciences, University of Debrecen

### Subjects for the theory part of the complex exam

#### *Main subjects:*

1. Physical geography
2. Landscape protection
3. Environmental protection
4. Social geography
5. Economic geography
6. Climatology
7. Palaeontology
8. Geology
9. Petrology
10. Energetics of establishments
11. Environmentally conscious buildings
12. Curriculum theory (in the case of PhD in education methods)

#### *Side subjects:*

1. Geomorphology
2. Landscape geography
3. Regional environmental protection
4. Agrometeorology
5. Regional economics
6. Regional policy
7. Social geography
8. Geology of Hungary
9. Environmental geology
10. Hydrogeology
11. Geochemistry
12. Geophysics
13. Mineralogy
14. Structural geology
15. Palaeoecology
16. Applied and engineering geology
17. Agrogeology
18. Historical climatology
19. Environmental climatology
20. Remote sensing
21. Geoinformatics
22. Comfort conditions of a closed environment
23. Studying natural and non-natural based insulation and building materials
24. Application of solar energy in the energy supply of establishments

## Appendix 2

### Rules for the preliminary defence

#### Doctoral Regulations of the University of Debrecen 17§(5)

Before finalizing the dissertation, it shall be submitted to a preliminary defence in accordance with the quality assurance plan of the doctoral school. The preliminary defence shall be organized by the council of the doctoral school. A written record of the preliminary defence shall be drawn up.

The chairperson and the members of the preliminary defence committee shall be appointed by the council of the doctoral school. The defence committee shall consist of at least three members, the chairperson, two opponents and additional members in accordance with the regulations of the doctoral school. All members of the committee shall have an academic degree. The chairperson of the committee shall be an accredited core member of a doctoral school of the disciplinary area at the University, preferably a member of the council of the given doctoral school. At least one-third of the committee members shall be external members, not teachers of the given doctoral school. Before the evaluation of the dissertation the secretary of the doctoral school shall send the dissertation submitted for preliminary defence to the University and National Library for plagiarism check. The Library shall issue the document about the results of the plagiarism check within 3 working days and the secretary of the doctoral school shall forward it to the opponents. In their opponents' report the opponents shall declare whether the dissertation – on the basis of the available data – meets the ethical requirements of scientific publications. The preliminary defence may also be held with the ethical objections of the opponents if the possible mistakes can be corrected in the final version of the dissertation without legal consequences. If the opponent of the preliminary defence has ethical objections the doctoral council of the disciplinary area shall be informed at the submission of the final dissertation. In this case the final version of the dissertation shall be checked for plagiarism again and the results of the repeated check shall be forwarded to the official opponents.

#### **Regulations of the Natural Sciences Doctoral Council, University of Debrecen regarding the preliminary defence**

This document is aimed to standardise the rules for the preliminary defence to be carried out according to Point (5) § 17 of the Doctoral Regulations in the case of doctoral schools related to the Natural Sciences Doctoral Council. Preliminary defences have to be organised at the level of doctoral schools (DS). The supervisor shall forward the **relevant initiation in writing** to the head/secretary of the DS **at least two weeks before the scheduled date**, indicating the **name of the candidate and the supervisor, the title of the thesis and the list of published (accepted for publication) publications**. In order to conduct the preliminary defence and to prepare the review, the thesis or the documents on which it is based (publications, manuscripts) shall be submitted in a form that enables the refereeing of the work carried out by the candidate and the obtained new scientific results. **The draft theses have to be submitted together with the initiation.** **The DS appoints a referee from the accredited supervisors. Based on the recommendation, the referee may be an external professional with PhD degree. The referee of the preliminary defence may also be the referee of the dissertation in the course of the subsequent doctoral defence. The referee shall review the draft dissertation and give his/her opinion in**

writing. The DS determines and publishes the location and time of the preliminary defence on the website of the DS. The preliminary defence may be organized within the framework of a working committee as well. The DI shall also determine and make public the committee of the preliminary defence, composed of a core member of the DS, the chairperson with a scientific degree and the referee. The preliminary defence is open, anyone can participate in it and may ask questions. In the course of the preliminary defence, the candidate presents his/her results in a brief free presentation, answers the questions from the referee, the committee and the audience. The preliminary defence shall be accompanied by an attendance sheet, which shall be attached to the report of the defence. The report shall be drawn up in 3 copies, one of which shall be placed in the archives of the DS and the other in the archives of Natural Sciences Doctoral Council, and the third shall be given to the doctoral candidate. On the basis of the presentation, the referee's opinion and what was said during the defence, the committee takes a position on the suitability of the dissertation for submission. Two written opinions are required, in which referees are required to declare that, on the basis of the available data (the result of plagiarism screening), the dissertation meets the scientific ethical requirements of publication. The report recording the resolution and the appendices shall be forwarded by letter to the Natural Sciences Doctoral Council by the secretary of the committee. On the basis of the outcome of the preliminary defence, the head of the DS and the doctoral program propose to the Doctoral Council further proceedings. The rules were accepted by the Natural Sciences Doctoral Council in the meeting on 13th June 2010 entered into force on 1st February 2010.

*(Highlighted text is expected to be modified, however, no accepted modified version is currently available.)*

### **Recommendations of the Doctoral School of Earth Sciences (DSES) for preparing the preliminary defence**

- The supervisor sends the name of the candidate, the title of the dissertation and the attached list of publications to the head of the DSES in writing prior to the planned defence. The supervisor discusses the members of the committee of the preliminary defence (1 chairperson, 2 referees and a secretary) with the head of the doctoral school.
- The supervisor contacts the members of the planned committee (1 chairperson, 2 referees and a secretary) and discusses the date of the defence with them.
- An invitation to the defence is prepared and sent out by the secretary of the committee (contact details – e-mail addresses – are given by the supervisor; a general form of the invitation letter is given by the secretary of the DSES/downloadable from the webpage of the DSES). At the same time the supervisor and the candidate advertise the preliminary defence (place notices on the notice boards of the Institute).
- The candidate sends the dissertation to the secretary of the doctoral school at least three weeks before the preliminary defence. The secretary forwards the dissertation to the University and National Library where a plagiarism check is performed.
- The document containing the result of the plagiarism check is sent to the referees by the secretary of the doctoral school.
- The candidate sends the dissertation and the planned theses to the members of the committee at least two weeks before the preliminary defence.
- The preliminary defence has to be completed according to the specifications of the natural sciences doctoral council.

- The secretary of the preliminary defence committee prepares a report on the defence according to the specifications of the natural sciences doctoral council and sends it to the DSES and also to the natural sciences doctoral council.

## Appendix 3

### Evaluation criteria for PhD dissertation opponents

The PhD degree is awarded on the basis of the preparation and defence of a doctoral thesis based on independent research and presenting new scientific results. The submitted dissertation, which has passed a plagiarism check, must first be evaluated in a preliminary discussion/debate and, if it is found to be in favour, the public defence may take place.

The objective assessment of dissertations is facilitated if the peer review is carried out according to uniform criteria. The following criteria will guide the reviewers at both stages of the review process. When preparing the final opinion, please also check that the short theses meet the formal and substantive requirements. During the public defence, the opponents may also add their comments on the candidate's presentation.

The opponents should address the following questions in their written opinions:

1. is the topic of the dissertation timely and in line with current developments in the field?
2. whether the structure of the dissertation, the proportion of chapters, the length of the summary are appropriate.
3. does the title of the dissertation correspond to its content, and does it fully answer the objectives set out in the introduction and the questions raised at the beginning of the research?
4. How well has the literature on the subject been written, are there any objectionable gaps, misinterpretations or critical comments?
4. Is the quality of the examination methods and their use in the context of the professional requirements?
5. Assess the scientific results of the thesis! Are the new scientific findings convincingly supported by the results presented?
6. Are there and which statements, conclusions and results are considered questionable by the reviewer?
7. Please comment on the language, clarity and quality of the illustrations in the dissertation.
8. The review for the public defence should address the content and professional quality of the short theses.

At the end of the evaluation, please state whether you consider the dissertation suitable for public discussion and, if successful, for the award of the degree of Doctor of Philosophy.

The dissertation will not be graded. Please prepare the evaluation within 2 months and send it (both in hard copy and electronically) together with the dissertation to the Institute of Earth Sciences of the University of Debrecen (4032 Debrecen, Egyetem tér 1) in case of a preliminary defence and to the Dean's Office of the Faculty of Science and Technology of the University of Debrecen (4032 Debrecen, Egyetem tér 1) in case of a public defence. If you are unable to comply with this request, please return the thesis by post. The review will be kept in the public domain and will be attached to the library copy of the dissertation.