
KEN

2023-2027

DOCTORAL SCHOOL

EDUCATION QUALITY REPORT

Szkoła Doktorska Nauk Ścisłych i Przyrodniczych

Uniwersytet Mikołaja Kopernika w Toruniu



Name and seat of the doctoral school

Szkoła Doktorska Nauk Ścisłych i Przyrodniczych

Evaluation period

5/15/19–12/18/24

Name and seat of the entity that is responsible for running the doctoral school

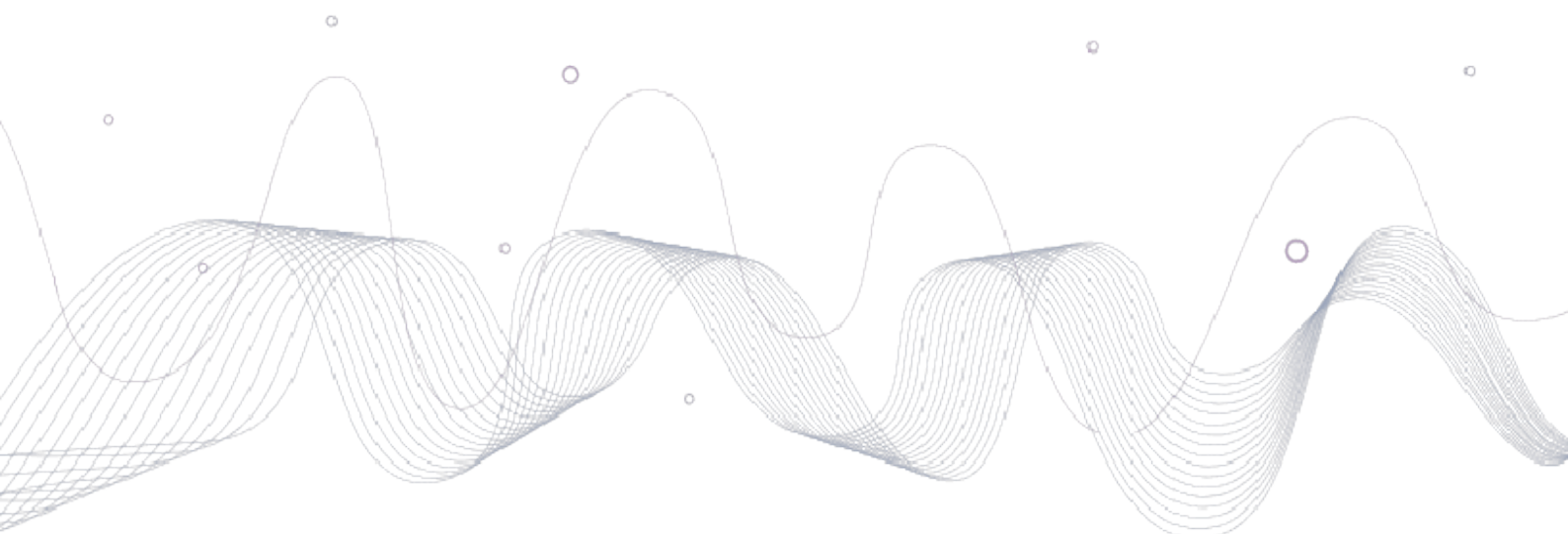
Uniwersytet Mikołaja Kopernika w Toruniu

Entities that jointly run the doctoral school (when conducted jointly)

-

Date of report

3/13/25



Composition of the evaluation team:

Chairman:

Wojciech Niżański

Secretary:

Agnieszka Ludwików

Team members:

Agnieszka Wyłomańska

Izabella Brand

Kamil Kucharski



TABLE OF CONTENTS

I. General information on the doctoral school	5
II. Information on the inspection and its course	6
III. Collaboration between the entity and the doctoral student self-government	7
IV. Information on the doctoral school to which the statutory criteria apply	8
V. Final opinion and recommendations	17
VI. Assessment and reason	19

I. GENERAL INFORMATION ON THE DOCTORAL SCHOOL

Name of doctoral school	Szkoła Doktorska Nauk Ścisłych i Przyrodniczych
Date of establishment	2019
Date of commencement of education at doctoral school	10/1/19
Entity cooperating in the conduct of education (this does not refer to entities co-founding a doctoral school)	-
Domains of study	Natural sciences (from: 01-01-2018) Veterinary science (from: 11-11-2022)
Discipline(s) of science or art in which training is provided	mathematics (from: 01-01-2018) biological sciences (from: 01-01-2018) chemical sciences (from: 01-01-2018) physical sciences (from: 01-01-2018) earth and related environmental sciences (from: 01-01-2018) astronomy (from: 01-01-2018) veterinary science (from: 11-11-2022)
Name/scope of the education programme	Framework Education Plan for AST NCU 01.10.2019 Framework Education Program for AST NCU 01.10.2021 Framework Education Program for AST NCU 01.10.2023
Number of instructors	95
Number of doctoral students undergoing training at the doctoral school (as of 3/7/25)	188
Number of supervisors in terms of guidance in preparing doctoral dissertations (as of 3/7/25)	117
Number of auxiliary supervisors in terms of guidance in preparing doctoral dissertations (as of 3/7/25)	69

II. INFORMATION ON THE INSPECTION AND ITS COURSE

The Doctoral School of Science and Life Sciences at Nicolaus Copernicus University (NCU) in Toruń was evaluated at the request of the Committee for the Evaluation of Science as part of its 2025 work schedule. The evaluation report was prepared based on the Doctoral School's self-evaluation report, data analysis from the Doctoral School and university websites, and a review of supporting documentation submitted at the evaluation team's request. The visit took place on May 8th, 2025, with all members of the Evaluation team present. The visit schedule was agreed upon in advance with the Doctoral School authorities. The visit was conducted according to the following program:

- 9.00-10.00 Meeting with the Director of the Doctoral School and Rectoral authorities
- 10.00-12.00 Meeting with the team preparing the self-evaluation report, the administration and the Doctoral School Council
- 13.00-14.00 Analysis of documentation concerning the Doctoral School, including the regulations of the Doctoral School, recruitment rules, curricula and legal acts that regulate the functioning of the Doctoral School, assessment of the quality of education
- 15.00-16.00 Meeting with teachers, supervisors and representatives of the Scientific Councils of the Disciplines represented in the Doctoral School
- 16.00-17.00 Meeting with doctoral candidates and the Doctoral candidate self-government

Throughout the visit, the Doctoral School's administrative staff and authorities remained at the disposal of the visiting team. Scheduled meetings were held in a conference room. The requested documentation was made available in a separate room. Meetings were attended by a representative group of supervisors and doctoral candidates from the Doctoral School, as well as representatives from the Doctoral School Council, Discipline Councils, and the Doctoral candidate self-government. A member of the Doctoral School office staff was also present.

Prior to the conclusion of the visit, the evaluation team appraised the extent to which the criteria were fulfilled and furnished a preliminary assessment to the University authorities and the Director of the Doctoral School during a debriefing meeting. The Doctoral School and University authorities, as well as authorities of the Faculty units, created very good conditions for the Evaluation team.

Prior to the end of the visit, the Evaluation team assessed the degree to which the criteria were met and formulated a preliminary conclusions, which were reported to the University authorities and the Director of the Doctoral School at a debriefing meeting. The Doctoral School and University authorities, as well as the Faculty unit authorities, created excellent conditions for the Evaluation team, which was appointed to evaluate the Nicolaus Copernicus University in Toruń's Doctoral School of Science and Life Sciences.

III. COLLABORATION BETWEEN THE ENTITY AND THE DOCTORAL STUDENT SELF-GOVERNMENT

The Doctoral candidates self-government plays an active role in providing input on legal acts and decisions related to doctoral education. The organization also participates in the process of appointing individuals to leadership positions, including the Director of the Doctoral School and the Vice-Rector responsible for doctoral education. Doctoral candidates are also represented on the Discipline Councils and the Doctoral School Council. The Doctoral candidates self-government is able to function and be active outside of its home unit. Doctoral candidates support the unit by communicating with them about current issues and reporting problems that arise during their education. They have signaled the need to strengthen the staff resources of the Doctoral School Office, improve the digital availability of documents, and increase access to information for unit staff. The Doctoral candidates self-government cooperates well, and there is a prospect of gradually expanding cooperation as part of the activities undertaken by both the subject and the doctoral candidates themselves.

IV. INFORMATION ON THE DOCTORAL SCHOOL TO WHICH THE STATUTORY CRITERIA APPLY

- The adequacy of the education programmes and individual research plans with respect to the learning outcomes for qualifications at level 8 of the PQF and their implementation:**

The learning outcomes defined in the learning framework program align with the a PRK Level 8 qualification. The training framework comprises a course component that refers to academic disciplines with learning outcomes relevant to the level 8 of Polish Qualifications Framework (PQF). The course's structure, content, and activities are designed to help doctoral candidates acquire the specific skills, knowledge, and abilities outlined in the learning outcomes. Although the learning outcomes included in the matrix are original, they do not correspond to those in the framework programme.

The scientific activities of doctoral candidates, as outlined in their individual research plans, align with PQF level 8 qualifications, as does the dissemination of their results. The individual research plan corresponds to Law on Higher Education and Science requirements and is systematically improved, modified, and monitored by the Director of the Doctoral School. The template of individual research plan, its construction, and its principles are clearly defined. While the doctoral candidate can modify the individual research plan, the document template itself is not systematically improved. Both the supervisor and the Director of the Doctoral School monitor the individual research plan, which allows for the assessment of students' interdisciplinary, international, publication, conference, grant, internship, popularization, and implementation activities. The Doctoral School supports doctoral candidates in implementing their individual research plans.

The implementation of the doctoral training and individual research plan is distinctive. The doctoral candidate curriculum is tailored to his needs and outlined in personalized training plans. The mode of teaching activities is defined. The framework program meets the requirements for awarding doctoral degrees.

The training process effectively incorporates interdisciplinarity, making it both original and relevant. The structure of the Doctoral School, its training, and its individual research plans are all interdisciplinary. Doctoral training takes an interdisciplinary approach in several ways: taking a course from another discipline, participating in an interdisciplinary seminar, choosing courses from a different disciplines than the dissertation topic, and taking cross-disciplinary courses. Doctoral candidates demonstrate international and interuniversity cooperation.

The process of improving the training program is unstructured and informal. The Doctoral School Council has substantive oversight of the course offerings. The Council evaluates the curriculum and selects teaching staff annually. However, the process is informal due to the lack of documents confirming the validity of the actions taken. Course offer and teaching staff are submitted by the discipline and reviewed by the Doctoral School Council. The Doctoral School Council maintains conventional training methods. There are no guidelines for creating new course offerings or modes of education. Because the direction for developing the educational program at the Doctoral School has not been clarified, there is no systematic approach to improving the educational framework program.

- **The method of assessing the learning outcomes for qualifications at level 8 of the PQF:**
The rules for verifying learning outcomes for PQF Level 8 qualifications must be made more accessible and unambiguous. The learning outcomes for PQF Level 8 qualifications included in the program framework are accessible, unambiguous, and complete. The learning outcomes listed in the verified syllabuses are original and available in USOSweb. However, these learning outcomes are not related to those in the educational framework program. The program framework does not assign learning outcomes for implementing the individual research plan. The course activities, as well as the document templates related to the implementation of learning outcomes, are complete, and available on USOSweb and the Doctoral School website. Completing the courses included in the individual study plan and implementing the individual research plan ensures the achievement of learning outcomes. The process of verifying learning outcomes needs improvement. As part of annual reports based on doctoral candidate study plans, the Director of the Doctoral School periodically reviews learning outcomes for course part and individual research plans. Learning outcomes for courses are available in the syllabus. The supervisor awards learning outcomes for the "Promoter Mentoring" course and reviews progress on the individual research plan. At the end of the program, the achievement of learning outcomes is verified in accordance with the 8 PQF.
The Doctoral School Council is responsible for improving the verification process of learning outcomes. Currently, the process is informal. It has not yet clarified the rules, procedures, and tools for verifying learning outcomes.

- Qualification of academic teachers and academic staff employed at the doctoral school:**
The staff's scientific activity and achievements align with the scope of the education provided. The academic staff includes NCU supervisors and academic teachers, as well as lecturers from other centers. The academic staff publish their research and has recognized achievements. They carry out research in international cooperation and have experience implementing grants from external funds.

The quality of the professional development activities must be improved. The academic staff is experienced and competent in the scientific supervision, they enhance qualifications by participating in activities offered by NCU and the international scientific community. Institution supports academic staff in obtaining external funding and expanding international cooperation. Academic staff have opportunity to exchange experiences at NCU events. There is a lack of training dedicated solely to the Doctoral School academic staff, whether compulsory or elective.

The entity's efforts to verify staff qualifications need to be strengthened. The Doctoral School Council is responsible for the substantive supervision of academic staff, the selection of supervisors is guided by the scientific policy of the Faculties and the competence of the candidates for supervisors. The Senate Resolution on recruitment to the Doctoral School specifies the rules for selecting candidates for doctoral supervisors. The evaluation committee has no objections in this regard. The Doctoral School Council considers the qualifications when selecting teaching staff. No other selection rules or guidelines are indicated. No minutes are taken at Doctoral School Council meetings.

Currently, the Doctoral School does not systematically review the quality and effectiveness of teaching. Hospitation for teaching courses are not performed. Surveys are not used to evaluate teaching activities. The Doctoral School is planning to implement an internal quality assurance system, including courses hospitation. The current evaluation system is informal. The Director of the Doctoral School has issued an order specifying the supervisor's responsibilities. These activities have not been monitored. Doctoral candidates can also evaluate their supervisors in the annual report.

- **The quality of the admission process:**

The quality and availability of information and internal legislation regarding the operation of the Doctoral School are reliable and sufficient. The Doctoral School has a transparent recruitment process that is accessible to foreigners and prioritises candidates with high research potential. The Doctoral School has developed effective promotion strategies to attract the best candidates.

The recruitment process is open, its rules are clear and accessible, and take into account the needs of disabled people. The rules are published within the statutory deadline. The recruitment process is transparent and competitive, and is open to international candidates. The Doctoral School uses transparent assessment criteria that are publicly available. The composition of the committee aligns with the recruitment rules and procedures. A representative of doctoral candidates may participate in the deliberations.

The method used to verify candidates for the Doctoral School is fair and transparent.

Recruitment follows a competitive, two-stage procedure. In the first stage, the Doctoral School Council and the Discipline Councils select the doctoral projects to be recruited. In the second stage, candidates are selected based on an analysis of the documentation they have submitted and an interview, during which they present and discuss the content of their MSc thesis with committee members. In a separate meeting, the prospective supervisor, the Director of the Doctoral School and the doctoral candidate discuss details of the collaboration and the training programme.

The entity's measures to improve the recruitment process are sound, albeit time-consuming. The multi-stage recruitment process has been refined in terms of form, and organisation. On average, there are two to three candidates per project. Around 40% of doctoral students at the Doctoral School are recruited for research projects funded externally.

- **The quality of scientific or artistic guidance, and support in research:**

The Regulations of the Doctoral School set out the methods and criteria for assigning and changing supervisors. Supervisors are assigned to doctoral candidates at the recruitment stage. The principles and procedures for selecting scientific projects during the recruitment process ensure that the high level supervision.

The Doctoral School has developed strategies to ensure that candidates will have a positive working relationship with their supervisor and can resolve conflicts effectively. The Director of the Doctoral School has issued an order setting out the requirements for supervisors and establishing rules for scientific supervision. The Director of the School and the Deans of the Faculties are responsible for resolving conflicts between supervisors and PhD candidates. The Director of the Doctoral School monitors the quality of supervision upon request. There is also an academic ombudsman at NCU.

The Doctoral School and Faculties at NCU provide with the resources and tools necessary for learning and development. This support is available to all PhD candidates, including those with disabilities and those who are parents. The Doctoral School's regulations clearly outline the provisions for these groups. Doctoral candidates are supported in completing their training programme, implementing their individual research plans and preparing their dissertations. They have access to the necessary infrastructure. Supervisors are active researchers with a proven track record. Supervision of the PhD candidates is implemented through the 'Mentoring' course in framework program.

Eminent professionals employed outside NCU are sufficiently involved in activities to support doctoral candidates in their research. The Doctoral School organises lectures by eminent external specialists as part of NCU units' seminar activities, in response to requests from doctoral candidates. Academics employed outside NCU play only a marginal role in providing academic supervision at the assessed Doctoral School.

The verification and evaluation of supervision, as well as the actions they take to improve its quality, is specified but needs to be implemented. Supervisor evaluation is conducted by the mid-term evaluation committee and included in annual reports. However, the verification of supervision at the mid-term evaluation stage does not have clear rules or evaluation criteria, and has not yet been implemented. The Doctoral School does not provide training for supervisors to help them develop their skills.

- **The reliability of the midterm evaluation:**

The principles of the mid-term evaluation and its availability comply with the statutory requirements. However, the selection of criteria does not align with the current legal framework. The mid-term evaluation process is defined by the Regulations of Doctoral School, and the detailed rules for its implementation are set out in an additional document. These documents and the templates are publicly available to doctoral candidates. Detailed information about the evaluation is also sent by email in reasonable advance. The main element of the evaluation is the implementation of the individual research plan. Other supporting criteria are also considered in this process, including the supervisor's opinion and progress in realisation of the framework programme. This is inconsistent with current Law on Higher Education and Science. When formulating the mid-term evaluation, the commission considers criteria relating to the topic, discipline, and nature of the research on an individual basis.

The composition and competences of the mid-term evaluation committee meet the statutory requirements and are relevant to the learning process. The committee comprises three members appointed by the Director of the Doctoral School in consultation with the respective Discipline Council chairpersons. The entity shall endeavour to recruit recognised experts from other centres, taking into account procedures to avoid potential conflicts of interest, including those involving commission members who are employees of NCU.

The timeliness of the assessment of mid-term evaluation meets the statutory objectives. The Doctoral School informs doctoral candidates of the planned assessment date at least 30 days in advance. There were a few exceptions to this deadline, but they did not affect the assessment. The mid-term evaluation supports the learning process and the implementation of research. There were a few cases of a negative assessment, which were not appealed. The results of the mid-term evaluation are public and both the doctoral candidates and their supervisor have access to them after prior notification of the Doctoral School office. Doctoral candidates receive the results of the evaluation together with the protocol by email. The results of the evaluation are not published in the public information bulletin or on the website.

The measures taken to improve the mid-term evaluation process are insufficient.

Improvements to the process are made informally through the exchange of comments with staff and doctoral candidates.

- **Internationalisation:**

The degree of internationalisation of the staff of the Doctoral School is at a significant level.

The academic staff has numerous scientific collaborations in Poland and abroad, which further positively influences the process of internationalisation of research and the participation of doctoral candidates in the international circuit. Two doctoral theses are carried out in the form of double degree. NCU and the Doctoral School have a wide range of lectures and seminars offered by foreign speakers. NCU academic staff and PhD candidates publish in co-authorship with foreign authors.

The learning process and scientific activities are outstanding in terms of their

internationalisation. The Doctoral School is committed to maintaining a high level of internationalisation in its course programme and research. The Doctoral School promotes doctoral candidates internationally. The Doctoral School offers funding for travel abroad and research through the Minigrants competition. Approximately 80% of the applications submitted in the competition are funded..

The learning process sufficiently considers the needs of foreign doctoral candidates. Lectures and communication at the Doctoral School are conducted in English. Foreign PhD candidates are provided with support to facilitate their integration into Polish society.

The methods employed to raise the profile of the Doctoral School internationally, and their effectiveness, are valid. The Doctoral School invests in the future by organising internships and summer programmes to seek out the best candidates.

- **The effectiveness of the doctoral education:**

Doctoral training concludes with the submission of a doctoral thesis by the deadline indicated in the individual research plan. Doctoral candidates have the option to extend their training by two years. The Regulations of the Doctoral School provide sufficient guidance in this regard. A high percentage of doctoral candidates obtain a doctoral degree after completing their training at the Doctoral School. Of those, 89% applied for a doctoral degree.

The scientific activity of doctoral candidates, as defined in their individual research plans, is highly effective. PhD candidates carry out their dissertations in research teams, which positively impacts their integration into the scientific community at the Faculties and motivates them to engage in scientific work.

The assessment of the quality of education in the Doctoral School by its doctoral candidates needs improvement. Currently, the evaluation is performed using annual reports, but it does not produce measurable results. The efforts are informal, which makes it difficult to assess their significant contribution to the quality of education in the Doctoral School. In response to feedback, the Doctoral School's management has improved the educational process and administrative services offered by the Doctoral School office.

Methods for using the results of doctoral candidate career monitoring must be developed and coordinated. The NCU Careers service is responsible for graduate tracking. The Doctoral School does not use system resources for this purpose.

V. FINAL OPINION AND RECOMMENDATIONS

FINAL OPINION

The Doctoral School of Science and Life Sciences at Nicolaus Copernicus University in Toruń provides education in two fields: exact and natural sciences, as well as veterinary science. These programs consist of seven disciplines and are based on an eight-semester framework program and an individual research plan. The Doctoral School has a recognised office location. The Doctoral School's rules and regulations align with legal guidelines. The Doctoral School is headed by a director, and the education is overseen by the vice-rector responsible for science. The office of the Doctoral School is staffed by one administrative employee. The duties of the person in charge of the Doctoral School and of supervising education are specified in the University's statutes and the Doctoral School's regulations. The Doctoral School has the Scientific Council and the Doctoral candidates self-government. Admission to the Doctoral School occurs through a competitive selection process for specific research projects. The framework program has a proprietary structure based on an extensive course component and does not include a research component. The individual research plan complies with the requirements of the Law on Higher Education and Science. The Doctoral School supports doctoral candidates in realisation of individual research plan. The educational process is tailored to the doctoral candidates' diverse needs and is interdisciplinary and internationalized. However, the educational program is not systematically improved in a formal way. The learning outcomes matrix is inconsistent with the outcomes specified in the syllabus for each subject. The content of the framework program, as indicated in the syllabus, is, however, consistent with the author's learning objectives and the current state of research in the disciplines represented in the Doctoral School. Implementing the framework program requires a significant time commitment from doctoral candidates. The scholarly activity and output of the staff are adequate for the scope of the training provided. The method of appointing and changing supervisors is regulated and in accordance with the Law on Higher Education and Science. The mid-term evaluation is timely, as required by the Law on Higher Education and Science. The composition and competencies of the committee conducting the mid-term evaluation meet the statutory objectives and are relevant to the ongoing educational process. The mid-term assessment criteria evaluate more than just progress in the individual study plan. However, the mid-term assessment process needs improvement and implementation. The most common supervisory approach involves a single promoter acting as a mentor. The mentor's responsibilities and the type of support provided are clearly defined. Doctoral candidates actively participate in decisions related to training, funding, and other matters concerning the doctoral program.

Strengths

High human and scientific potential

Access to research infrastructure

- Internationalization of education and research

Current two-stage recruitment model for the doctoral project

Weaknesses

Systemic solutions for the verification and improvement of evaluated processes are lacking

Course-based framework program

One-person administrative staff of the school

Opportunities

Expanding cooperation with representatives of the social and economic environment to improve the educational process

Threats

Lack of a quality assurance system for doctoral education

RECOMMENDATIONS

By Criteria:

K1_1: The framework program should be modified by reducing the number of course hours and including a research component in the form of an individual research plan.

K1_2: Revise and formalize the process of improving the doctoral training based on established objectives, criteria, procedures, and documentation.

K2_1: Prepare a set of learning outcomes defined in the framework program.

K2_2: Develop procedures and tools to verify learning outcomes.

K3_1: Develop a training program for supervisors to learn the necessary skills and competencies to effectively guide doctoral candidates.

K3_2: Clarify clear and unambiguous rules for selecting teaching staff.

K3_3: Develop and implement an educational quality assurance system.

K5_1: Develop a procedure for addressing conflict situations between a doctoral candidate and their supervisor, as well as between a PhD candidate and a lecturer.

K5_2: Prepare a comprehensive and effective system for cyclically evaluating supervisors by doctoral students.

K6_1: Establish a set of standards for assessing supervisor care and prepare guidelines for conducting this evaluation for members of the mid-term evaluation committee.

K6_2: The mid-term evaluation criteria must be adapted to align with legal regulations.

VI. ASSESSMENT AND REASON

Final assessment
positive

Reason:

Following the evaluation of the quality of education, the Evaluation Team has recommended a positive assessment of the Doctoral School of Natural Sciences at Nicolaus Copernicus University in Toruń. The educational process enables doctoral candidates to achieve learning outcomes that are appropriate for PRK level 8. The high level of qualification of the academic staff, access to research infrastructure, the internationalisation of the framework programme, the internationalisation of the research, all contribute to the high quality and effectiveness of the doctoral training. In view of the above, the Evaluation Team recommends carrying out another evaluation in six years' time, in accordance with Art. 259, paragraph 2 of the Law on Higher Education and Science passed on 20 July 2018. (Journal of Laws of 2024, item 1571, as amended).

The System of Evaluation of Doctoral Schools is financed by
the Ministry of Science.

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