SELF-ASSESSMENT REPORT ON THE QUALITY OF EDUCATION IN THE DOCTORAL SCHOOL

Szkoła Doktorska AWF Poznań

Akademia Wychowania Fizycznego im. Eugeniusza Piaseckiego w Poznaniu

Evaluation period: 01-10-2019 to 11-05-2025
EZD case number: DN-WAN.560.4.2025

Date and time:
30.07.2025, 10:53

TABLE OF CONTENTS

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VISITING CARD

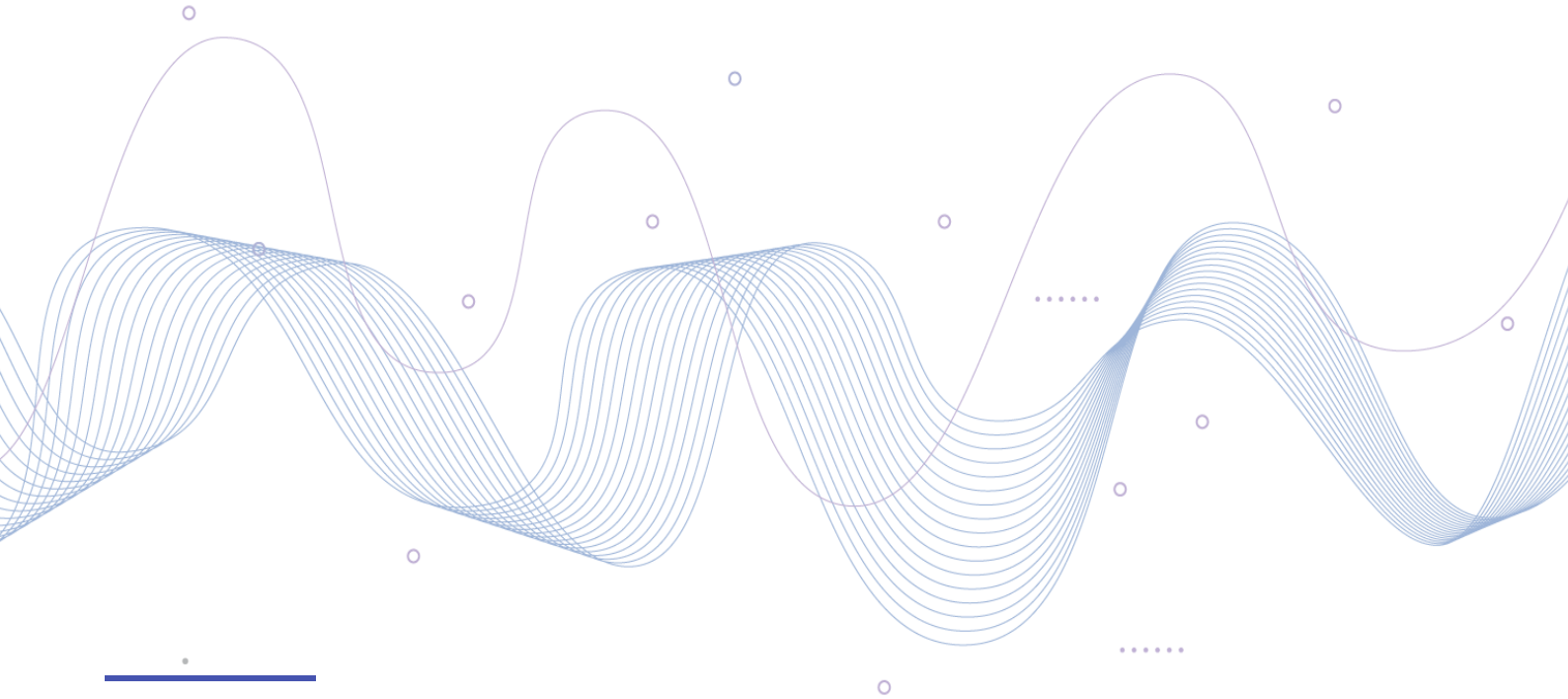
Basic Information about the Doctoral School

Year of Creation

2019

Institution running the doctoral school

Akademia Wychowania Fizycznego im. Eugeniusza Piaseckiego w Poznaniu



Field of Education	Education Disciplines
Medical and health sciences	physical culture science

Name/Scope of the Education Program (PL)	Name/Scope of the Education Program (EN)
Program Szkoły Doktorskiej AWF w Poznaniu	The Doctoral School Program at the Poznań University of Physical Education

Characteristics of the Doctoral School

Where Do We Come From?
The Doctoral School (DS) of the Eugeniusz Piasecki University of Physical Education (AWF) in Poznań was established in 2019 as a continuation of the university's long-standing tradition of doctoral education. Prior to that, since 1997, third-cycle doctoral studies were conducted here, during which dozens of PhDs were awarded in the discipline of physical culture sciences. This discipline, formally classified within medical sciences, is in practice distinctly interdisciplinary. It combines biological, social, technical, and humanistic approaches, focusing on human physical activity—its determinants and consequences in various contexts: health, education, sport, rehabilitation, recreation, psychology, and technology.

Who Are We?
Our Doctoral School is a small yet dynamic and integrated academic community. Its strengths include individualized education, high teaching quality, collaborative relationships, and access to research and expert resources. Our intimate scale allows for responsiveness to doctoral students' needs and flexibility in educational planning. Supervisors are recognized scholars with experience in national and international research projects (e.g., NCN, Horizon 2020, EEA Grants), teaching expertise, and active publication records. Faculty members regularly participate in seminars, mid-term review committees, evaluate Individual Research Plans (IRPs), and support doctoral development. Some courses are also taught by experts from other universities, including Adam Mickiewicz University. Starting in 2025, we plan to engage a foreign lecturer to teach courses in artificial intelligence in scientific research.

Where Are We Headed?
Our mission is to educate researchers with strong scientific potential, publishing capabilities, and transversal skills—prepared for independent scientific work and the practical implementation of research results. We welcome individuals committed to advancing knowledge in areas related to physical culture: physical education, sport, rehabilitation, dietetics, psychology, physiotherapy, neurobiology, recreation, or tourism. The knowledge and competencies gained in the School translate into the professional quality of specialists working in the field of physical activity—teachers, coaches, dietitians, physiotherapists, adapted physical activity specialists, sports analysts, sports managers, and others. We support our doctoral students in developing both academic and professional careers through mentoring, research grant competitions, professional internships, science communication activities, and international involvement.

Our Strengths
 Individualized education process – each doctoral student follows an Individual Research Plan (IRP), monitored annually and through a mid-term evaluation procedure, which includes a presentation, progress documentation, and committee evaluation with an external expert.
 Alignment with PQF level 8 – the curriculum includes courses in research methodology, ethics, data analysis, research project management, AI, bibliometrics, academic teaching, and soft skills (critical thinking, scientific communication, creativity, teamwork).
 Openness and accessibility – recruitment is conducted in both Polish and English, with clear criteria and options for grant-funded candidates (e.g., NCN, NAWA). Applicants receive individual evaluations from the committee.
 Infrastructure – doctoral students have access to AWF Poznań's extensive research infrastructure, including biomechanics, physiology, psychology, dietetics, neurophysiology, and physiotherapy labs, as well as Moodle, MS Teams, USOS, and electronic document workflow systems.
 Mentorship and support – supervisors actively assist in research planning and implementation, support publication and presentation preparation, and help with funding applications. In case of difficulties, mediation or supervisor changes are possible.
 Internationalization – courses in English, open recruitment policies, and support for international students, publications in

international journals, participation in conferences and internships (Erasmus+, PROM), guest lectures from foreign scholars, and the planned employment of an international lecturer.
 Openness to new formats – readiness to implement industrial and project-based doctorates, participation in inter-university initiatives (e.g., PODEST—optional lectures for doctoral students from Poznań institutions), integration with the Poznań Doctoral Agreement.
 Systematic quality improvement – we conduct course and study condition surveys and plan to formalize evaluation meetings and graduate career tracking.

Our School operates within a university awarded the prestigious HR Excellence in Research distinction by the European Commission, affirming high standards in research management, young researcher support, and equal treatment. AWF Poznań also holds an A+ scientific category in physical culture sciences, demonstrating top-tier research and strong support for doctoral development.

Our Achievements (2019–2025)
 76 co-authored publications by doctoral students (including JCR-indexed journals; total IF: 225.57; Ministry points: 7452),
 Doctoral student participation in grant programs (NCN, JPND, PROM, Erasmus+),
 Presentations at prestigious international conferences (e.g., Greece, France, Spain),
 Completed study visits and foreign internships,
 Educational effectiveness: 100% of doctoral degrees awarded to those who completed the program. Others are at the final stage—most have already submitted their dissertations,
 All doctoral students undergoing mid-term evaluation received a positive result.

Our Development Strategy
In the coming years, we plan to:
 Develop a digital document management system for doctoral students,
 Hire international lecturers and intensify global promotion,
 Implement systematic graduate career tracking,
 Expand inter-university and international cooperation,
 Strengthen mechanisms for evaluating teaching quality,
 Continue promoting equality, accessibility, and doctoral student participation.

Why Join Us?
We are a place where science meets practice, and passion meets professionalism. We offer academic support, infrastructure, experience, and openness to research needs. The Doctoral School of AWF Poznań is a space for creative development for those who want to conduct ambitious research in physical culture and have a real impact on human quality of life.

Additional Information about the Doctoral School

Educating Staff

Numerical data for the evaluation period

Educating Staff	Instructors	Supervisors	Assistant Supervisors
Number of people	11	32	9

Doctoral Students

Number of doctoral students (total): 38

Recruitment during the evaluation period	2019/ 2020	2020/ 2021	2021/ 2022	2022/ 2023	2023/ 2024	2024/ 2025	Total
Number of recruited doctoral students	5	8	6	7	5	7	38
Number of doctoral students who completed the doctoral school	1	0	0	0	0	0	1
Number of doctoral students removed from the doctoral student list	1	2	1	1	0	0	5

Mid-term evaluation results	Positive	Negative
Number of Doctoral Students	21	0

Educational Programs	Number of Doctoral Students
The Doctoral School Program at the Poznań University of Physical Education	38

Additional Numerical Data on Doctoral Students

Number of foreign doctoral students	2
Number of doctoral students with disabilities	0
Number of doctoral students in the Implementation Doctorate program	0
Number of doctoral students in the EU program	0
Number of doctoral students employed by the institution running the doctoral school as academic teachers or research staff	8

Graduates

Numerical data for the evaluation period

Number of graduates who applied for initiation of proceedings for the award of a doctoral degree	1
Number of doctoral students who completed the doctoral school	1

INFORMATION ON THE ENTITY'S COOPERATION WITH THE DOCTORAL STUDENTS' COUNCIL

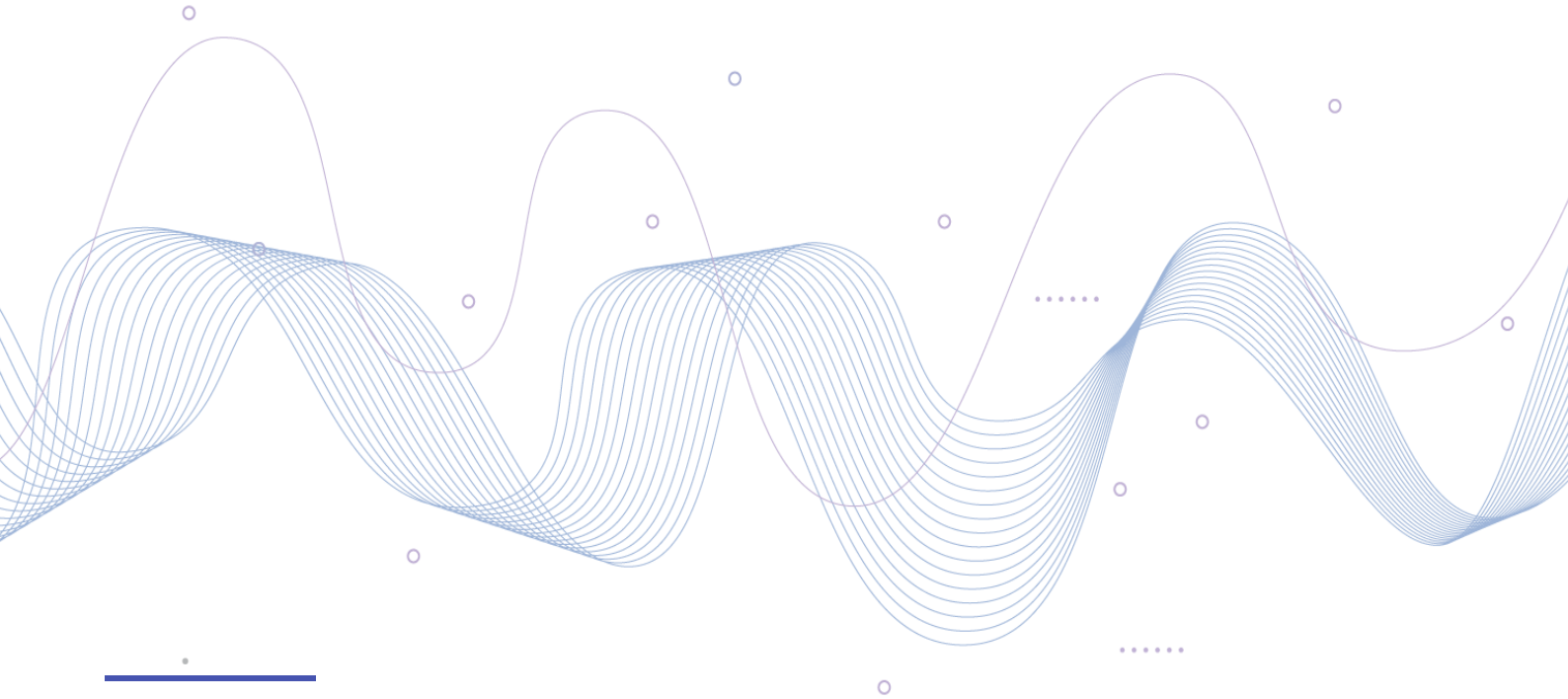
The Doctoral School (DS) of the University of Physical Education (AWF) in Poznań maintains regular and systemic cooperation with the Doctoral Student Council. Council representatives review documents concerning the organization and functioning of the DS—such as the education program and regulations—prior to Senate discussion, thus influencing adopted solutions. At the DS Director's request, the Council appoints a doctoral student representative to recruitment committees (and in the future, to mid-term evaluation committees) as well as other university bodies. A meeting with a Council representative is also part of the information day for first-year students, fostering early academic community integration.

The institution demonstrates full openness to the Council's initiatives, which support internationalization, communication, and academic integration. The DS supports both the Council's daily operations and its involvement in the Poznań Doctoral Agreement (PPD). Joint initiatives with PPD include the 1st (Gułtowy, 2024) and 2nd (Zielonka, 2025) Poznań Doctoral Council Forums. The Council also co-organized the 2nd Open Meeting of the National Representation of Doctoral Students (KRD; Poznań, 2024), demonstrating nationwide impact. It also participated in a project commissioned by the Ministry of Science under the "Development and watchdog activities in science and higher education" initiative (Zielonka, 2024), with full support and presence of DS authorities.

The Council receives financial support for organizing academic, training, and integration events, both internal and within regional (PPD) and national (KRD) frameworks.

Ongoing dialogue with the Council is essential to ensuring educational quality and effectively addressing the needs of DS AWF Poznań doctoral students.

INFORMATION ON THE DOCTORAL SCHOOL GROUPED BY 8 EVALUATION CRITERIA



1. Adequacy of the education program and individual research plans to the learning outcomes for qualifications at PRK level 8 and their implementation

The doctoral school curriculum at the Doctoral School (DS) of the University School of Physical Education in Poznań (AWF Poznań) has evolved over the evaluation years. It was initially designed with reference to Polish Qualifications Framework (PQF) level 8 outcomes, though formally approved by Senate Resolution No. 19/2024. The latest version, adopted by Resolution No. 74/2025, takes effect in 2025/2026 and builds on previous assumptions, incorporating earlier conclusions.

The curriculum includes learning outcomes in three areas: knowledge, skills, and social competence (as detailed in Annex). The objective of education, as defined in § 4 of the Regulations, is to create conditions for conducting research, preparing a doctoral dissertation, publishing, teamwork, and participation in academic life. Currently, the program consists of 661 teaching hours over 8 semesters, in accordance with the schedule and list of subjects.

The curriculum covers, among other things, methodology, research ethics, data analysis, publishing, project management, academic teaching, and the development of soft skills such as critical thinking, decision-making, creativity, and teamwork. Classes are delivered by university staff and external experts. In response to technological developments, a course titled “AI in Scientific Research” has been introduced.

Individual Research Plans (IRP), developed in the first year in accordance with Senate Resolution No. 161/2019, include a schedule of research, publication, outreach, and project activities for the entire duration of education. Their implementation, aimed at achieving learning outcomes consistent with PQF level 8, is verified annually based on the doctoral student's report, supervisor’s opinion, and a mid-term evaluation with participation of an external expert.

The curriculum and IRP support both achievement and systematic monitoring and documentation of learning outcomes, ensuring compliance with PQF level 8 (details are provided in Annex 1 to the program). Their design and development are carried out in cooperation between the DS director, Vice-Rector for Research, the doctoral student council, and the Scientific Council, with changes approved by the University Senate.

The development of the curriculum is also informed by feedback from doctoral students, collected informally during meetings with the DS director. The intimate nature of the school facilitates quick identification of needs and implementation of changes. An example is the introduction of the course "AI in Scientific Research" at the request of doctoral students. A formal evaluation tool is planned, allowing for systematic monitoring of teaching quality.

The DS emphasizes interdisciplinarity by providing access to the university’s laboratory infrastructure regardless of research topic. Supervisors represent various specialties, and doctoral seminars organized twice a year promote integration, presentation of results, and exchange of experiences. Participation in interdisciplinary research projects fosters competencies in collaboration, communication, and analysis of complex problems.

The DS actively supports doctoral students’ publication, project, and outreach activities. Preparation of the doctoral dissertation is based on a series of original publications in indexed journals. The curriculum includes classes on grant proposal writing, project management, bibliometrics, commercialization of research, and workshops on the publication process. Doctoral students receive substantive and administrative support for grant applications and preparing scientific presentations.

The DS encourages doctoral student involvement in science communication, for example through events such as the Poznań Science and Art Festival or Researchers’ Night, which may count as professional internships. It also promotes co-organizing conferences and participation in scientific associations. Mandatory "Journal Club" classes develop the ability to analyze English-language literature and present it within the research team.

The curriculum includes project-based components aimed at developing transversal competencies such as critical thinking, creativity, decision-making, and problem-solving. Classes are interactive and require active doctoral participation (discussions, case analyses, presentations, written assignments). At the same time, the curriculum and IRP implementation support the development of research independence and ability to conduct scientific activity – from planning to dissemination and evaluation.

Self-assessment: The curriculum and IRP are consistent with PQF level 8 requirements, continuously improved, interdisciplinary, and flexible. They enable achievement of learning outcomes in all required areas. The criterion is fully met. An

area for further development is implementing tools that allow doctoral students to systematically evaluate teaching quality.

2. Method of verifying learning outcomes for qualifications at PRK level 8

The process of verifying learning outcomes at the Doctoral School (DS) of the University of Physical Education in Poznań has been designed as a comprehensive evaluation system that includes the development, implementation, and improvement of tools and procedures aimed at ensuring the achievement of learning outcomes at level 8 of the Polish Qualifications Framework (PQF). From the outset, during the construction of the education program and the templates for Individual Research Plans (IRP), the necessity for systematic assessment of doctoral students' progress in the areas of knowledge, skills, and social competences was taken into account.

The verification of learning outcomes occurs in multiple stages. The first level includes the completion of courses—through knowledge tests, assessment of participation, written assignments, and presentations. The next stages involve annual reports on the implementation of the IRP and supervisor evaluations, which form the basis for continuing education. At the mid-point of the cycle, a formal mid-term evaluation is conducted by a committee that includes an external expert. The committee assesses progress in implementing the IRP.

Standardized assessment tools are used: IRP forms (Senate Resolution 161/2019), templates for annual reports, mid-term evaluation sheets, and committee protocols. The evaluation process involves supervisors and members of the Scientific Council (SC). Supervisors review IRPs and annual reports, participate in doctoral seminars, and are responsible for ongoing monitoring of the doctoral student’s progress.

The verification covers not only academic research competencies but also the interdisciplinary and practical application of knowledge. Doctoral seminars, held twice a year in the form of public presentations, enable students to present research findings, develop communication skills, and foster openness to critique.

Learning outcomes are verified using diverse methods tailored to the course content and objectives: tests, essays, presentations, practical tasks, simulations, and evaluation of teamwork (Appendix 2 includes a list of courses, descriptions, learning outcomes, and assessment methods). Particular emphasis is placed on the development of transversal skills such as critical thinking, scientific communication, self-presentation, creativity, risk assessment, and project management.

As of the 2024/2025 academic year, doctoral students are required to submit a written response to feedback received during seminars and mid-term evaluations. This encourages reflection, reassessment of the research process, documentation of responses to feedback, and facilitates the work of evaluation committees. The formal definition of learning outcomes in accordance with level 8 PQF, approved by Senate Resolution 19 in 2024, marked another step in improving the system. Detailed descriptions of the outcomes (KSD) and their alignment with PQF characteristics are included in Appendix 1. The introduction of new courses (e.g., artificial intelligence) demonstrates the program’s flexibility in responding to evolving scientific needs.

The education program and IRP are consistent with the requirements of conducting scientific activity. They include project planning, data analysis, publishing, presenting results, and the development of collaboration skills. These competencies are assessed through coursework and mid-term evaluation.

The final stage of learning outcome verification is the SC's decision, based on analysis of program implementation, the IRP, and the doctoral student’s scientific achievements. This decision determines whether the student proceeds to the doctoral degree conferral procedure.

Verification principles were considered already during the program and IIRP design stages, as reflected in program documents. The DS regulations define the framework for the educational process—preparation of the IRP, annual reports, mid-term evaluation, and SC opinions. The regulations provide an organizational framework enabling the alignment of student progress with learning outcomes. All verification principles are publicly available—in both Polish and English—on the DS website and clearly defined in the regulations, Senate resolutions, approved IRP forms, annual reports, and mid-term evaluation documents.

IRP and report templates enable the monitoring of doctoral student activities aligned with level 8 PQF outcomes—particularly research, publication, conference, and science communication activities. All forms are available online (in Polish and English), and their paper versions are archived in the DS office. To enhance and modernize the system, implementation of an integrated digital system for doctoral student documentation management is planned. Since the 2023/2024 academic year, doctoral students are served electronically through the USOS system. This lays the foundation for further digital development, including the archiving of IRPs, annual reports, and mid-term evaluations.

Mid-term evaluation is conducted by a committee appointed by the SC, with the participation of an external expert in the discipline of physical culture sciences. The committee reviews the doctoral student's documentation and assesses consistency with the IRP. The outcome may be positive or negative—the latter resulting in removal from the list of doctoral students. To date, all students in the DS have received a positive mid-term evaluation.

The IRP is a key document for verifying student activity. It includes research, publication, dissemination, conference participation, and completion of professional practice. Each activity can be linked to specific learning outcomes.

The SC supervises the content and implementation of the IRP. After being completed by the student and reviewed by the supervisor, the IRP is presented at the SC meeting, where it is subject to secret ballot after presentation and potential revisions. In 2020, all IRPs were initially rejected and accepted after revisions. In 2021 and 2022, only one student each year received a negative assessment (12.5% and 16.7%, respectively), and the corrected IRPs were later accepted. In 2023–2024, all doctoral students received positive IRP assessments (100%).

Since the 2023/2024 academic year, students may evaluate academic staff, study conditions, and course quality via USOS surveys and internal forms. Though the surveys had limited reach so far, they support monitoring and improving teaching and learning outcomes. From 2024/2025, doctoral students teaching courses will also be evaluated by students. Both qualitative and quantitative data are used to identify areas for improvement. Plans include formalizing regular evaluation meetings with the DS Director (after summer seminars) and conducting a survey after the four-year cycle—previously done informally through individual conversations.

The DS responds to student feedback—e.g., changing teaching staff or adding practical components. Examples include modifying the curriculum based on course feedback, leading to changes in instructors and expanded course content.

Professional practice, defined by DS Director's Order No. 1/2021, includes teaching, assisting in classes, and participating in science outreach events. Completion is based on documentation.
Doctoral students are treated as researchers whose primary task is to conduct research projects, while coursework provides tools for this purpose. Given the small size of the DS, relationships between students and faculty are often direct and informal, supporting real-time feedback and quick responses to educational needs. However, in such a small group, full anonymity in formal surveys may be difficult, so everyday interactions remain a valuable component of the quality system.

The above-mentioned actions—such as requiring written responses to committee feedback, adapting the program to student suggestions, expanding course offerings (e.g., AI), and developing a digital documentation system—constitute a coherent and evolving system for improving learning outcome verification methods. Its foundation lies in documentation analysis, ongoing feedback, and staff openness to changing academic and societal needs.

Self-assessment: The learning outcome verification process at DS AWF Poznań complies with level 8 PQF. It covers all stages: design, implementation, evaluation, and enhancement. High quality is ensured by clear tools, staff involvement, standardized forms, and open communication. While the teaching evaluation system is still being implemented, further improvements are planned, such as formalizing evaluation meetings, developing surveys, and digitizing records. The DS demonstrates its ability to systematically improve learning outcome verification in line with the evolving needs of doctoral students and the academic environment. Criterion fully met.

3. Qualifications of academic teachers or research staff conducting education at the doctoral school

The teaching faculty at the Doctoral School (DS) of the University of Physical Education (AWF) in Poznań demonstrates high scientific and didactic competencies, forming the foundation for achieving the intended learning outcomes. It comprises renowned scholars with achievements in the field of physical culture sciences and complementary disciplines such as research methodology, psychology, and philosophy of science. The team includes experienced supervisors, active researchers, and experts in national and international projects.

Faculty members have participated in prestigious projects under NCN grants (HARMONIA, PRELUDIUM BIS 2, OPUS), ministerial projects, and operational programs. Their scientific activity is distinctly interdisciplinary and international. They collaborate with institutions such as the National Science Centre, National Centre for Research and Development, and the Polish Academy of Sciences. Prof. Maciej Wilski, current Director of the DS, led an international project funded by the EEA and Norway Grants Fund for Regional Cooperation, while Prof. Agata Wiza took part in a Horizon 2020 project. Many team members completed international scientific internships, contributing to the high quality of education. Profiles of five academic teachers involved in DS are included in the appendix.

A key asset of the faculty is their supervisory achievements. Prof. Stanisław Kowalik has supervised 21 doctoral graduates, Prof. Krzysztof Łastowski – 10, Prof. Jan Celichowski – 7, and Prof. Ewa Ziemann – 5 female PhD students, all with distinction. The faculty's high qualifications are further confirmed by their frequent roles as reviewers in doctoral, habilitation, and professorial proceedings.

Faculty members are actively involved in organizing and developing the DS – they serve on recruitment and mid-term evaluation committees, conduct doctoral seminars, provide scientific consultations, and support doctoral students in preparing Individual Research Plans (IRP). Prof. Krzysztof Kusy, former DS and Doctoral Studies director, co-developed the reform of doctoral education, aligning it with current scientific standards. Prof. Krzysztof Łastowski contributes his expertise as a former director of the Doctoral Studies Program at the Institute of Philosophy of Adam Mickiewicz University and organizer of nationwide doctoral seminars.

The didactic and subject-specific competencies of the faculty are noteworthy. Prof. Maciej Tomczak, a recognized expert in research methodology, teaches data analysis to doctoral students at the Faculty of Psychology and Cognitive Science, Adam Mickiewicz University. Faculty members have received numerous national and international awards and act as experts and reviewers in scientific project evaluations, demonstrating their academic recognition.

The university systematically supports faculty development through periodic assessments, participation in evaluation committees, and enabling the enhancement of scientific, didactic, and supervisory competencies. The team’s qualifications align with the DS curriculum goals and doctoral students' needs, contributing to the high quality of education and research support.
During the evaluation period, faculty participated in numerous training sessions and courses aimed at developing both research and teaching skills. Under the "Integrated Development Strategy of AWF" and "Barrier-Free AWF Poznań" projects, training was conducted in teaching students with developmental disorders, mental health problems, visual impairments, and chronic illnesses. Workshops were also held for administrative staff on the needs of people with disabilities.

Faculty also took part in courses on data analysis, IT tools, e-learning, teaching in English, using professional databases, public speaking, and persuasion. Language courses enhanced English proficiency, supporting the internationalization of the educational offer.

Training also covered intellectual property, know-how, and commercialization of research. In 2024, under the "Regional Initiative of Excellence" project, a training series on copyright, patent protection, and knowledge transfer to the economy was held.

Faculty selection is based on clear, precise criteria, including scientific and teaching achievements, supervisory experience, and capacity to conduct advanced research aligned with the DS discipline. Special emphasis is placed on publications, participation in externally funded projects (NCN, NCBiR, Horizon Europe), and international experience.
Competencies are verified during recruitment and ongoing work – candidates present documentation of their academic achievements, teaching experience, and academic functions, which are reviewed by the Scientific Council (SC) and DS Director. Periodic evaluations, in line with university regulations, also include analysis of doctoral student surveys on content quality, communication, and instructor engagement.

In cases of negative evaluations, lack of scientific activity, or failure to fulfill teaching duties, faculty may be limited or excluded from the teaching team. However, before such actions, corrective steps are taken, and the overall academic and teaching involvement is considered. One example was replacing the previous instructor for the philosophy of science and research ethics course (due to low publishing activity) with two experienced professors: Prof. Stanisław Kowalik and Prof. Krzysztof Łastowski.
During the evaluation period, there were no cases requiring intervention or disputes related to duties. Cooperation between faculty and doctoral students was constructive and conflict-free.

Self-assessment: The DS faculty at AWF Poznań meets the highest scientific, didactic, and organizational standards. They effectively support doctoral students in achieving their research goals, as evidenced by the students' scientific achievements. The DS consistently supports faculty development, aligning its offer with current scientific challenges. The growing level of internationalization, interdisciplinarity, and innovation in teaching ensures stable and continuous education that meets top national academic standards. As part of further development, the DS plans to include a foreign lecturer to teach a course on AI in scientific research. The selected candidate has confirmed readiness to cooperate. This initiative aims to strengthen doctoral students' linguistic and cultural competencies and broaden the spectrum of research approaches. The DS at AWF Poznań strives to systematically build a globally oriented academic community.

4. Quality of the recruitment process

The recruitment process at the Doctoral School (DS) of the University of Physical Education (AWF) in Poznań is designed to be transparent, open, and accessible to all candidates who meet the statutory requirements, including individuals with disabilities and those from outside the host university. The recruitment procedure is governed by the resolutions of the Senate of AWF Poznań. All legal acts and informational materials—including recruitment rules, a candidate guide, sample forms, and the schedule—are published in advance in both Polish and English on the University's and DS's websites.

The recruitment principles adopted by the Senate ensure an open competition, clear evaluation criteria, and a transparent scoring system. They are published at least five months before the start of the recruitment on the DS website and in the Public Information Bulletin. After fulfilling formal requirements, the competition criteria include: (a) English language proficiency, (b) publication record, and (c) evaluation of five aspects of the research project. A declaration of consent from the prospective supervisor is also required. Recruitment committees (attached), appointed by the Scientific Council (SC), are composed of academic teachers (habilitated doctors or professors) with diverse specializations and significant supervisory experience, ensuring high-quality assessment. Each committee includes a doctoral student representative designated by the student government, which enhances procedural transparency and incorporates the perspectives of the doctoral community.

An essential part of the interview is the assessment of the candidate's English proficiency. Every Polish citizen must give a five-minute oral presentation of their research project in English without multimedia or notes. This is evaluated by both the committee and an English language lecturer who acts as a language advisor and is a formal member of the committee. After the presentation, candidates answer questions in English. A "satisfactory" assessment is required to proceed—a negative result excludes the candidate from further stages. For foreign applicants, the entire interview is conducted in English. The publication record, including (co-)authorship of papers in JCR-listed or MEiN-recognized journals, is scored but is not an eliminatory criterion. The research project is evaluated on (a) its relevance to physical culture sciences, (b) originality, (c) cognitive or applied value, (d) conceptual maturity, and (e) feasibility within the legal timeframe for education. After the discussion, professors assign scores in a secret ballot. Candidates who exceed the scoring threshold defined in the recruitment resolution proceed to the next stage.
Each recruitment committee meeting concludes with a written justification of the candidate's evaluation, including strengths and weaknesses of the research project and the candidate's scientific aptitude. This information is added to the protocol and sent to candidates as justification along with their recruitment results. This practice fosters transparency and provides insight into the academic basis of the evaluation.

The DS ensures equal opportunities for all applicants regardless of institutional affiliation, nationality, or health status. The rules are identical for all, and recruitment committees assess candidates solely on substantive criteria, irrespective of their funding sources. All recruitment materials are published simultaneously in Polish and English. The recruitment resolution allows for reasonable adjustments for candidates with disabilities, guaranteeing accessibility and respect for health and dignity.

To support candidates seeking a supervisor, the DS website features profiles of potential supervisors, including information on their affiliations, research areas, and keywords. These profiles are available in both Polish and English, enabling international applicants to find suitable matches for their projects.

The DS accepts doctoral students funded by external sources, such as NCN or NAWA grants or other national and international institutions. So far, four candidates have been admitted outside the regular recruitment quota through NCN grants (e.g., OPUS, JPND). Provisions enabling this path are included in the DS Regulations and recruitment resolution, reflecting the DS's openness to varied doctoral pathways.

In response to the interest of a candidate wishing to pursue an implementation doctorate, the DS developed a dedicated procedure and amended its regulations accordingly. Previously, there had been no such candidates, so the procedure was not implemented. These solutions highlight the DS's flexibility and readiness to support diverse doctoral models.
Recruitment results are published according to the schedule and in compliance with the Administrative Procedure Code. Each candidate receives a personalized written result and justification of the decision, delivered with acknowledgment of receipt. An anonymized list of results is also published on the DS website, ensuring procedural transparency. Between 2019 and 2024, one appeal was filed against a recruitment decision, which was successfully resolved.

The DS places great emphasis on systematically improving its recruitment process. Each committee meeting ends with a summary discussion initiated by the committee chair, who by regulation is the DS Director. Committee members raise procedural issues, difficulties, or improvement suggestions. These are collected and analyzed, leading to changes in documents and procedures as needed.

Over time, several improvements have been made, demonstrating the DS's responsiveness and institutional maturity. Requirements for supervisors have been refined regarding publication records, institutional affiliation, and the number of supervisees. Each supervisor may oversee no more than four PhD students simultaneously, ensuring high-quality supervision. A recruitment quota was introduced, currently six candidates per year, to maintain personalized research support and financial and infrastructural assistance.
The scoring system has also evolved. In the current version, effective for four years, up to 80 points are awarded for the research project (based on defined criteria) and up to 20 for publication record. This evolution reflects a move toward more objective and transparent evaluation.

Other changes include updates to annexes, application forms, scoring thresholds, and clarification of the definition of physical culture sciences. These changes were gradual, deliberate, and discussed within the recruitment committee and SC, evidencing systematic and qualitative improvements.

During the evaluation period, the recruitment process proceeded smoothly and on schedule. Interest in the DS remained stable. The number of applicants and admissions from 2019 to 2024 were as follows: 9/5 (56%), 13/8 (62%), 8/6 (75%), 8/6 (75%), 4/3 (75%), and 7/6 (85%). One applicant was admitted in 2021/2022 but began in 2022/2023 due to residence documentation issues (a foreign national). Additionally, one candidate was admitted after a successful appeal (2023/2024), and four more were recruited through externally funded grants (NCN).
Applicants demonstrated high academic levels, with many having scientific publications and research or outreach experience. Committees evaluated the proposed projects as well-aligned with the DS profile and feasible within the program's duration.

The DS promotes its offer through its website, social media, science popularization events (Researchers' Night, Science and Art Festival), individual contact with thesis students, student science club festivals, and international programs such as PROM. Materials are clear, up-to-date, and comprehensive.

Self-assessment: The recruitment process at the DS of AWF Poznań is transparent, based on equal treatment, and upholds high academic standards. The rules are clear, public, and faithfully implemented in a spirit of openness and integrity. The DS addresses the needs of diverse candidates, including those with disabilities and those funded by external or implementation grants. The DS continuously improves its recruitment process based on committee experience and candidate feedback. In the institution's opinion, Criterion 4 has been fully met.

5. Quality of scientific or artistic supervision and support for conducting scientific activities

Scientific supervision at the Doctoral School (DS) of the University of Physical Education (AWF) in Poznań is based on a partnership between the doctoral student and their supervisor(s), whose appointments are approved by the Scientific Council (SC). Supervisors are not formally assigned during recruitment; instead, candidates propose a supervisor and submit a written declaration from the proposed supervisor expressing willingness to provide scientific guidance. This declaration is verified in terms of the alignment between the research topic and the supervisor's academic expertise. Within three months of starting the program, the doctoral student must submit a formal request to appoint a supervisor, naming a specific academic teacher. This request is evaluated by the SC, which approves the supervisor based on scientific achievements, doctoral supervision experience, thematic alignment, and prior supervisory activity. The SC may recommend a change of supervisor to ensure better thematic fit and quality of supervision. In the case of an auxiliary supervisor, the SC ensures that their competencies are both necessary and unique—unavailable to either the main supervisor or the doctoral student.

This model ensures that each doctoral student is supervised by a qualified individual. Supervisors must hold at least a postdoctoral (habilitation) degree and have a documented academic record in the relevant research field. The evaluation also considers prior supervisory experience and current scientific involvement. This supports a content-based partnership and enhances the doctoral student's publishing potential from the beginning of the education process.

Supervisors are responsible for supporting the doctoral student's research work and the organization of their research workshop, consulting on progress, and evaluating the advancement of the dissertation. They provide didactic guidance, assess travel applications, annual reports, and requests for extension of the education period. In cases of insufficient progress, they may request removal of the student from the DS register.

Supervisor changes may be initiated by either the doctoral student or the supervisor (with a written request and mutual consent), and the final decision is made by the SC. In practice, this mechanism functions efficiently—previous (rare) changes were conducted with respect for the student's best interest.

Supervisor performance is evaluated on multiple levels: during the mid-term evaluation, annual reports, and doctoral student feedback. If needed, corrective actions are taken, such as adjustments to the Individual Research Plan (IRP). Student feedback also informs the reassignment of supervisors and instructors. A limit of four doctoral students per supervisor was introduced as a quality-enhancing mechanism. Plans include further supervision quality reviews and supervisor development activities.

If collaboration issues arise, the student may contact the DS Director, who initiates mediation—usually with the Vice-Rector for Research. The university also provides access to free and anonymous consultations with an academic psychologist and an Equal Treatment Officer.

Doctoral students have access to AWF Poznań's research infrastructure—including specialized laboratories, the library, scientific information systems, and electronic databases. From the start of the program, each student receives a university email address, intranet access, Microsoft Teams account, and library resources, enabling effective communication, remote learning, and use of digital knowledge and administrative systems. They may also apply for institutional research funding (e.g., departmental statutory and teaching funds, Young Researchers' Development Program, Regional Initiative of Excellence) and external funding (e.g., NCN, NAWA), managing resources through the Financial Control System and Electronic Document Circulation.

The DS accommodates individual needs of doctoral students who are parents or persons with disabilities—through measures such as flexible schedules or individualized IRP pathways. The AWF campus is adapted for persons with reduced mobility.

The education program and IRP are developed through consultations with supervisors and biannual doctoral seminars. Doctoral students also participate in teaching internships, which enhance their didactic competencies.

Scientific support includes participation in conferences, research projects, internships, and science communication events. Supervisors encourage membership in academic societies and international networks. External experts are also invited—for example, Prof. Krzysztof Łastowski from the Faculty of Psychology and Cognitive Science at Adam Mickiewicz University currently teaches at the DS, as part of a new outreach initiative. Plans are underway to invite a foreign expert to teach a course on artificial intelligence in scientific research.
The DS actively participates in regional academic networks. The DS Director and the doctoral student council president regularly attend meetings of the Poznań Doctoral Agreement, representing AWF. These meetings provide a platform for experience-sharing and coordinating joint academic initiatives. One such initiative is the PODEST project—a series of optional

lectures for doctoral students from Poznań's doctoral schools and research institutions. The aim is to expand educational offerings by allowing students to attend courses outside their home institution. Participation is voluntary and based on the student's request. The project is currently in the preparation phase.

AWF Poznań holds the HR Excellence in Research award granted by the European Commission to institutions implementing researcher development strategies in line with the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers. This distinction affirms the university's high standards in supporting early-stage researchers, ensuring equal treatment, transparent procedures, and career support—contributing to the DS's educational quality and recognition of doctoral students as full-fledged young researchers.

Self-assessment: The scientific supervision system at the DS of AWF Poznań operates transparently, flexibly, and responsively to doctoral students' needs. The high qualifications and availability of supervisors, along with the possibility of changes, foster conditions for implementing ambitious research projects. The university provides institutional, financial, infrastructural, and psychological support. In the institution's view, Criterion 5 has been fully met.

6. Integrity of the mid-term evaluation process

Mid-term evaluation at the Doctoral School (DS) of the University of Physical Education (AWF) in Poznań represents a key milestone in assessing the progress of doctoral students in implementing their Individual Research Plan (IRP) and the education program. The evaluation takes place after the completion of the fourth semester (i.e., after two years of study). The principles governing the process—publicly available in Polish and English on the DS website—were approved by the Scientific Council (SC) and published as an annex to Senate Resolution No. 161/2019 of 5 November 2019. The procedure was implemented by the DS Director in accordance with Articles 201–204 and 207 of the Law on Higher Education and Science and the DS Regulations.
The aim of the mid-term evaluation is to objectively assess the advancement of the IRP, with particular emphasis on the adequacy and timeliness of undertaken activities. The evaluation covers the implementation of research tasks and scholarly activities specified in the IRP, especially: alignment with the IRP, progress on the doctoral dissertation and publications, acquisition of research funding, participation in research projects and conferences, involvement in training and internships, and presence in the academic community.

The procedure has two stages. In the open part, held as a mid-term seminar, the doctoral student presents the research assumptions and progress before the evaluation committee and seminar participants and answers questions. In the closed part, the committee assesses the IRP based on a submitted report, documentation, and the presentation. The DS Director attends the closed session as an observer, providing additional oversight of the process's integrity and accuracy.

The evaluation committee is appointed by the SC upon the DS Director's request. The academic qualifications of committee candidates are discussed during SC meetings, ensuring a high level of expertise in the evaluation process. The committee consists of three senior academic staff members (with at least a postdoctoral degree), at least one of whom is employed outside AWF Poznań, and at least two represent the discipline of physical culture sciences. Neither the supervisor, auxiliary supervisor, nor the DS Director may be members of the committee or participate in the assessment process. Each committee member votes (by secret ballot) to assign a positive or negative outcome to the evaluation. A positive result requires at least two affirmative votes; a negative result requires at least two opposing votes.

A negative evaluation leads to the doctoral student's removal from the DS register, in accordance with Article 203(1) of the Law on Higher Education and Science and §10 of the DS Regulations. The removal takes place through an administrative decision, from which the student may request reconsideration by the Rector. This procedure is clearly defined in the applicable legal framework.

The results are publicly accessible through the DS's internal system. Both doctoral students and their supervisors receive written feedback including comments, strengths and weaknesses of IRP implementation, and questions or suggestions for further research. This facilitates understanding of the committee's decision and supports reflective planning of the next stages of the doctorate.
After each evaluation cycle, the DS Director analyzes the process and invites committee members to provide feedback. As a result, organizational and procedural improvements are made, such as updating forms or clarifying instructions for evaluators.

As part of ongoing efforts to increase transparency and student engagement in the DS, it is planned to introduce the possibility for a doctoral student representative—appointed by the Doctoral Student Council—to attend the open part of the mid-term evaluation as an observer. This applies only to the seminar session (doctoral student's research presentation and open scientific discussion). The representative will not participate in the closed deliberations or voting and will not have any decision-making power. This initiative aims to enhance transparency and familiarize students with academic evaluation standards.

During the evaluation period, four mid-term evaluations were conducted, held annually at the end of September. All evaluations were carried out on schedule and in line with the applicable regulations. No negative outcomes leading to dismissal were recorded. The majority of doctoral students demonstrated high levels of IRP implementation, confirming the effectiveness of the adopted educational model.

Self-assessment: The mid-term evaluation process at the DS of AWF Poznań is transparent, reliable, and consistent with the legal framework. The openness of results, systematic feedback, and the inclusion of external experts enhance the credibility of the process. The procedure meets statutory requirements and aligns with best academic practices, providing meaningful support to doctoral students in planning and conducting research. In the institution's view, Criterion 6 has been fully met.

7. Internationalization

The Doctoral School (DS) of the University of Physical Education (AWF) in Poznań undertakes a range of actions aimed at internationalizing the educational process and supporting international scientific activities of doctoral students and academic staff. Due to the specific profile of the institution, these efforts are intentional, evolutionary, and tailored to the discipline's characteristics.
The official languages of instruction at the DS are both Polish and English. All information and documents related to the functioning of the DS are prepared and made available to doctoral students in both languages. The education program systematically includes activities aimed at enhancing language competence and preparing students to function in an international academic environment. One such example is the mandatory course "Journal Club," conducted entirely in English, during which doctoral students analyze recent publications from leading international journals and engage in scientific discussion. In the case of international doctoral students, all classes and individual academic consultations are also conducted in English.

The element of internationalization is embedded in the structure of the Individual Research Plan (IRP), which includes participation in international conferences and internships, international cooperation, and publication in globally indexed journals. DS doctoral students have actively taken part in international events. For instance, in July 2023, Ms. Maryna Khorhova participated in the "14th International Session for Educators…" in Olympia (Greece), where she delivered a presentation and led workshops on the Eduball method. The trip was funded by the National Science Centre (NCN) for researchers from Ukraine. In June 2024, Mr. Bartosz Wasiński presented a poster at the "International MotoNeuron Society 2024" conference, supported by the JPND 2022 (NCN) grant.

Under the Erasmus+ Program, two DS doctoral students undertook international internships. In 2024, Ms. Beata Jóźwiak visited the University of Magdeburg, followed in 2025 by the University of Barcelona. Both short-term trips were conducted within the BIP (Blended Intensive Programme). In 2023, Mr. Wojciech Jelonek completed student internships in clinics in Paris and Nice, France.
The realization of these internationalization activities is monitored during the annual and mid-term evaluations. The DS admission process is conducted in both Polish and English. Regulations, forms, and timetables are available online in both languages, and admission exams can be conducted in English. The academic profiles of prospective supervisors are also published in English, facilitating access for international applicants.

The DS provides full institutional support for international students, including individualized assistance with legal residence procedures, accommodation, and adaptation. During the evaluated period, two international doctoral students were enrolled at the DS, representing 6.1% of the total student population. This relatively low percentage indicates a clear need for further internationalization. Administrative and academic communication is bilingual (Polish and English), which supports the integration of international students. Joint courses and seminars (partly conducted in English) and open guest lectures create space for intercultural collaboration.

In accordance with the rules for preparing doctoral dissertations at AWF Poznań, each doctoral student completes their dissertation in the form of a series of publications in indexed journals, significantly increasing the international visibility of the DS.

Doctoral students are encouraged to apply for funding for international travel and conference participation via the university's internal competition for individual research projects. The university provides full administrative support in this process. During the evaluation period, seven study visits or internships were conducted under the PROM mobility program funded by the Polish National Agency for Academic Exchange (NAWA). Doctoral students had the opportunity to visit institutions such as Northumbria University (UK), Universidad Politécnica de Madrid (Spain), Faculty of Physical Education and Sport at Charles University in Prague (Czech Republic), German Sport University Cologne (Germany), School of Physical Education and Sport at the University of São Paulo (Brazil), Laboratoire de Neurosciences Cognitives at Aix-Marseille Université (France), and Oakland University (USA). Outside the evaluation period, another visit is scheduled for July 2025 to Fondazione Salvatore Maugeri in Italy, funded under the NAWA Canaletto 2024 program.

Doctoral students actively publish in international journals and participate in international research projects. An example of such collaboration is the JPND Call 2022 project (DC4MND), coordinated by Prof. Marcin Bączyk. The project—entitled "Multidimensional mechanistic investigations of trans spinal direct current stimulation in motor neuron disease"—is being implemented at AWF Poznań with partner institutions located across Europe. The project's stipend holder, selected through an internal competition, is doctoral student Mr. Bartosz Wasiński.
Between 2019 and 2025, four open lectures were organized featuring international scholars, with doctoral students invited to attend. In June 2019, Prof. Anthony Morris from Victoria University in Melbourne delivered a lecture titled "Flow in physical activity: research on a positive perspective for sports performers and exercisers." In 2022, AWF Poznań hosted two guest speakers: in October, Prof. Bert Little from the University of Louisville (Kentucky, USA) presented "Child and adolescent

overweight and obesity: alarming rise in prevalence of type 2 diabetes ages 6–18 in black and white children. Reasons and solutions," and in December, Prof. Holger Preuss from Johannes Gutenberg University Mainz (Germany) delivered a lecture on "Legacy, sustainability and CSR at mega sports events." In 2024, Dr. Simona Pajaujiene from Lithuanian Sports University in Kaunas gave a lecture titled "How to live with health and exercise? Relaxation techniques and the impact of breathing on our health and everyday life." These events enrich the academic environment and help build international academic relationships.

The DS plans to enhance its international promotion through the creation of profiles in English-language academic platforms (e.g., ResearchGate), inclusion in international databases such as ORCID, development of partnerships with foreign institutions, active participation in international academic events as an educational unit, and the appointment of a foreign lecturer to teach a course on "AI in Scientific Research"—a candidate has already been selected.

Self-assessment: The level of internationalization at the DS of AWF Poznań can be described as moderate but steadily developing. The DS implements actions that support internationalization, including English-language courses, support for international students, and promotion of doctoral student mobility. Future development will focus on intensifying international promotion, expanding English-language educational offerings, and strengthening collaboration with foreign academic centers. In the institution's view, Criterion 7 has been met satisfactorily, with a clearly defined strategy for further development.

8. Effectiveness of doctoral education

Percentage of individuals who obtained a doctoral degree	Doctoral students who applied for initiation of proceedings for the award of a doctoral degree	Doctoral students who were awarded a doctoral degree	Doctoral students who were denied the award of a doctoral degree
in the number of doctoral students who completed their education at the doctoral school during the evaluation period	100 %	100 %	0 %
in the total number of doctoral students who completed their education at the doctoral school	100 %	100 %	0 %

Between 2019 and 2025, the Doctoral School (SD) at AWF Poznań implemented its first full education cycle (4 years, with a possible extension of up to 2 years). Most doctoral candidates from the 2019 intake received extensions, with the cycle ending in September 2025. One candidate defended her dissertation, which – according to POL-on – represents a 100% degree award rate among those who completed training during the evaluation period. The remaining candidates are at an advanced stage – most have submitted their dissertations and await reviews or defense dates.

During the period, SD candidates co-authored 76 scientific publications (IF 225.575; 7455 MNiSW points). Achievements include participation in international projects, NCN grants, and conference presentations, including the JPND project, international conferences, and Erasmus+ and PROM NAWA mobility programs.

Since 2023/2024, doctoral candidates have been able to evaluate academic teachers via USOS. No evaluations were submitted in winter; one was in summer. Surveys on study conditions and remote learning were also conducted. In the general survey (n=5), administrative support, study conditions, and online information were rated positively. In the remote learning survey (n=2), e-learning platforms and online learning organization were rated well.

SD plans career monitoring activities in cooperation with the Career and Student Support Office, to be launched after the first cycle ends. The sole graduate has been employed by the University.

Self-assessment: SD AWF Poznań provides effective, regulation-compliant education. Outcomes such as publications, project involvement, and advanced research stages confirm high quality. The evaluation system and planned career monitoring actions demonstrate SD's commitment to improvement. Criterion 8 is satisfactorily met, with strong development potential.

1. physical culture science

Achievement Description

Key Scientific Achievements Related to the Implementation of the Individual Research Plan (IPB)

1. Julia Ciążyńska, MA

In 2022, the article *Effects of a Modern Virtual Reality 3D Head-Mounted Display Exergame on Simulator Sickness and Immersion Under Specific Conditions in Young Women and Men: Experimental Study* was published in the prestigious journal *JMIR Serious Games* (IF 4.00, 100 MEiN pts). This Q1 journal (Scopus) in the fields of "Health Care Sciences and Services," "Public, Environmental, & Occupational Health," and "Rehabilitation" presents new experimental data in the expanding field of exergaming using VR 3D technologies.

The study assessed the impact of a modern exergame (Audio Trip) using Oculus Quest 1 goggles on immersion levels, simulator sickness (SS), physiological parameters (heart rate, respiration, energy expenditure), and gender differences in response. It also verified whether the activity met WHO's minimum weekly physical activity recommendations.
Forty-five healthy participants (23 men and 22 women aged 19–29) took part in two 30-minute sessions of increasing intensity. Tools included the SSQ, immersion scales, Ruffier test, and Zephyr BioHarness 3.0. Measures were taken pre- and post-intervention.

Findings showed the 30-minute session was safe and well tolerated, with simulator sickness symptoms emerging only after 60 minutes, especially in women. Immersion increased across both genders. Men showed higher respiratory rates and energy expenditure, with no gender differences in heart rate.

This achievement directly supports the IPB, which planned an experimental evaluation of physiological, subjective, and behavioral responses to VR-enhanced physical activity. Tools and procedures used—including immersion, SS symptoms, physiological and gender assessments—were in line with the plan.

Year: 2022
Publication: *JMIR Serious Games*
DOI: 10.2196/41234

2. Jakub Jurga, MA
In 2023, the article *Effects of Acute Beetroot Juice and Sodium Nitrate on Selected Blood Metabolites and Response to Transient Ischemia: A Crossover Randomized Clinical Trial* was published in the high-impact journal *The Journal of Nutrition* (IF 3.8, 140 MEiN pts). It provides significant insights into the effects of dietary nitrates on endothelial function and human metabolism.

The study compared the effects of acute beetroot juice (BRJ) and sodium nitrate (NIT) intake on blood nitrate levels and metabolic responses, including ischemia-induced microcirculatory reactions (using AngioExpert and NADH fluorescence). The design was a randomized crossover clinical trial.

Results showed BRJ raised NOx, betaine, and choline levels without increasing TMA or TMAO—suggesting safety of plant-derived nitrate supplementation. Vascular and mitochondrial responses varied by compound type.

This is the first of the planned IPB publications using outlined techniques to evaluate endothelial function and metabolic responses to nitrate supplementation, and forms a basis for personalized dietary interventions.

Year: 2023
Publication: *The Journal of Nutrition*
DOI: 10.1016/j.tjnut.2023.12.018

3. Beata Jóźwiak, MA

In October 2024, the article *Effect of Exercise Alone and in Combination with Time-Restricted Eating on Cardiometabolic Health in Menopausal Women* was published in *Journal of Translational Medicine* (IF 7.5, 100 MEiN pts). It won the **Polish Academy of Sciences' award for best doctoral publication** in medical sciences.

This was the first study to examine combined effects of time-restricted eating (16:8 model) and exercise on cardiometabolic health in menopausal women—a typically underrepresented group. Sixty-two women (aged 41–61) were assigned to an exercise-only or exercise + fasting group for 12 weeks. Body composition, biochemical blood markers, BP, and anthropometrics were analyzed.

The combination group showed significant improvements in BMI, blood pressure, HOMA-IR, SII, and body fat percentage, with moderate effect sizes. A BMI reduction of 0.8 kg/m² could lower type 2 diabetes risk by 14–22%; a 10 mmHg SBP reduction could lower CVD risk by ~20%. Lean mass was preserved.

The article directly supports IPB Hypothesis 2 concerning intermittent fasting effects in perimenopausal women. Tools used included body composition analysis and blood biochemistry, per the plan.

Year: 2024
Publication: *Journal of Translational Medicine*
DOI: 10.1186/s12967-024-05738-y

4. Sara Górna, MA

In March 2025, the article *Effects of Different Intensities of Endurance Training on Neurotrophin Levels and Functional and Cognitive Outcomes in Post-Ischaemic Stroke Adults: A Randomised Clinical Trial* was published in *International Journal of Molecular Sciences* (IF 4.9, 140 MEiN pts). It provides novel evidence for post-stroke neurorehabilitation and can inform therapeutic strategies.

This trial evaluated 3-week low- (LICT) vs. moderate-intensity (MICT) endurance training in 52 post-ischemic stroke patients. Functional, physical, and cognitive performance and serum neurotrophins were measured. Both groups also received standard rehabilitation.

The MICT group showed improved motor function (6-point increase in RMA), especially upper limb recovery, and better outcomes in VO_2max and 6MWT. BDNF levels significantly decreased in MICT. No clear changes were found for IGF-1, irisin, or VEGF-A.

This aligns with the IPB hypothesis about exercise intensity and neurotrophin effects. Measurements followed the IPB protocol: neurotrophins, VO_2max, ACE-III, RMA, and BI.

Year: 2025
Publication: *International Journal of Molecular Sciences*
DOI: 10.3390/ijms26062810

5. Wojciech Jelonek, MA

In 2025, the article *Effects of Attentional Focus on Spatial Localization of Distal Body Parts and Touch in Two-Arm Position Matching* was published in *Experimental Brain Research* (IF 1.6, 70 MEiN pts). It offers new insights into proprioception and attention in sensory conflict scenarios.

This experimental study analyzed how focusing on distal body parts or touch affects proprioceptive matching under reliable and conflicting sensory conditions. Muscle spindle reliability was manipulated through thixotropic conditioning.

In Experiment 1 (balanced condition), attention and touch had no effect. In Experiment 2 (conflict condition), focusing attention on distal parts or touch reduced position accuracy, increasing proprioceptive illusion. Passive touch alone had no impact.

This aligns with IPB goals to examine top-down influences on somatosensory integration in proprioception. It has implications for neurorehabilitation—showing that forced localization during disrupted proprioception may hinder recovery.

Year: 2025
Publication: *Experimental Brain Research*
DOI: 10.1007/s00221-024-06976-8

ATTACHMENTS

Adequacy of the education program and individual research plans to the learning outcomes for qualifications at PRK level 8 and their implementation

No.	File type	Filename
1	Education programmes during the evaluation period	Educational programmes during the period covered by the evaluation.pdf

Method of verifying learning outcomes for qualifications at PRK level 8

No.	File type	Filename
1	The method of assessing the learning outcomes for qualifications at level 8 of the PQF	Appendix criterium 2.pdf

Qualifications of academic teachers or research staff conducting education at the doctoral school

No.	File type	Filename
1	physical culture science	Lecture profiles of DS - 5 scientists.pdf

Quality of the recruitment process

No.	File type	Filename
1	The compositions of the admissions committees during the evaluation period and the rationale for their selection with the aim of maintaining high admission standards	Composition of recruitment committees during the evaluation period.pdf
2	The admissions rules of the doctoral school during the evaluation period	DS recruitment rules validated during the term covered by the evaluation.pdf
3	The regulations of the doctoral school during the evaluation period	DS Regulations validated during the term covered by the evaluation.pdf

Quality of scientific or artistic supervision and support for conducting scientific activities

No.	File type	Filename
1	Internal regulations that pertain to the midterm evaluation and that are in force during the evaluation period, such as evaluation rules and criteria	DS recruitment rules validated during the term covered by the evaluation.pdf

STATEMENTS

- I hereby declare that the information contained in the self-assessment report is fully consistent with the factual and legal status.
- I hereby declare that the information contained in the self-assessment report in Polish and English is fully identical in substance.
- I hereby declare that the documents attached to the self-assessment report in Polish and English are fully identical in substance.

Signature

Podpisano przez/ Signed by:
Jacek
Zieliński
Data/ Date: 31.07.2025 10:06
mSzafir

AUTHORIZATIONS

Added files

Educational programs during the period covered by the evaluation

Academic year	Document content	Link do the document
2019/2020	Senate Resolution No. 134/2019 regarding the establishing of curriculum at Doctoral School Poznań University of Physical Education	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchwala_134_2019_SEnatu_Program_ksztalcenia_Szkola_Doktorska.pdf
	Annex No. 1 to the Senate Resolution No. 134/2019 – curriculum	https://awf.poznan.pl/wp-content/uploads/2023/02/Progr_i_opis_tresci_kszt_SzDo_-_wersja_uchwalona_134_2019-1-ENG.pdf
2024/2025	Senate Resolution No. 19/2024 regarding the approval of learning outcomes at the Doctoral School Poznań University of Physical Education	https://bip.awf.poznan.pl/wp-content/uploads/2025/01/uchwala_nr_19_2024_senatu_-_zatw_efektow_uczenia_sie_w_sd.pdf
	Annex No. 1 to the Senate Resolution No. 19/2024 – description of the intended learning outcomes at the Doctoral School	Annex-to-Resolution-No.-19-2024-of-the-Senate-of-the-Academy-dated-17-December-2024.pdf
2025/2026	Senate Resolution No. 74/2025 regarding the approval of learning outcomes at the Doctoral School Poznań University of Physical Education	https://bip.awf.poznan.pl/wp-content/uploads/2025/03/uchwala_74_2025_senatu_-_program_ksztalcenia_w_szd.pdf
	Annex No. 1 to the Senate Resolution No. 74/2025 – education program	https://awf.poznan.pl/wp-content/uploads/2025/07/Education-Program-since-2025-26.pdf
	Annex No. 1 to the Senate Resolution No.74/2025 – description of the Intended Learning Outcomes at the Doctoral School	https://awf.poznan.pl/wp-content/uploads/2025/07/Appendix-No.-1.-Description-of-the-Intended-Learning-Outcomes-at-the-Doctoral-School.pdf
	Annex No. 2 to the Senate Resolution No.74/2025 List of courses with descriptions	https://awf.poznan.pl/wp-content/uploads/2025/07/Appendix-No.-2.-List-of-courses-with-descriptions.pdf
	Annex No. 3 to the Senate Resolution No.74/2025 Schedule for the Implementation of the Study Program	https://awf.poznan.pl/wp-content/uploads/2025/07/Appendix-No.-3.-Schedule-for-the-Implementation-of-the-Study-Program.pdf

Appendix No. 1. Description of the Intended Learning Outcomes at the Doctoral School of the Eugeniusz Piasecki University School of Physical Education in Poznań
Scientific discipline: physical culture sciences
Qualification framework level: PQF level 8

The description takes into account the universal first-level characteristics for level 8 as defined in the Act of December 22, 2015 on the Integrated Qualifications System (Journal of Laws of 2016, items 64 and 1010), as well as the second-level characteristics defined in the Regulation of the Minister of Science and Higher Education of November 28, 2018 on second-level characteristics of learning outcomes for qualifications at levels 6–8 of the Polish Qualifications Framework.

Symbols of learning outcomes	**Description of learning outcomes at the Doctoral School PQF level 8**	Reference to the second-level characteristics of learning outcomes for qualifications at PQF level 8
	Knowledge	
KSD_W01	Possesses advanced knowledge of conducting scientific research, including the principles of formulating research problems, presenting results, and evaluating and reporting progress.	P8S_WG P8S_WK
KSD_W02	Is familiar with key concepts and terminology used in physical culture sciences and possesses interdisciplinary knowledge enabling the solution of complex research and practical problems.	P8S_WG P8S_WK
KSD_W03	Understands philosophical currents and the principles of professional ethics, as well as their application in science.	P8S_WK
KSD_W04	Is familiar with statistical methods and their application in data analysis.	P8S_WG
KSD_W05	Is familiar with the principles of designing and conducting teaching activities in higher education and understands the principles of teaching professionalism and the stages of professional development.	P8S_WK
KSD_W06	Is familiar with the principles of preparing grant applications, the commercialization of research results, and their application in economic practice.	P8S_WK
	Skills	
KSD_U01	Can effectively conduct research in accordance with the individual research plan, report progress, and verify methodological assumptions.	P8S_UW

KSD_U02	Can analyze and interpret key concepts and critically evaluate scientific literature in the fields of medical sciences, health sciences, and physical culture sciences in the context of their application in scientific research.	P8S_UW
KSD_U03	Can independently design a study, select appropriate research methods, and apply the obtained results in social and economic practice.	P8S_UW
KSD_U04	Can conduct scientific communication in English, present research findings in academic forums, and actively participate in discussions, taking into account the principles of professional self-presentation.	P8S_UK
KSD_U05	Can design teaching activities and reflectively analyze their own pedagogical practices.	P8S_UU
KSD_U06	Can manage a research team and collaborate effectively in interdisciplinary teams by integrating various methodological approaches.	P8S_UK, P8S_UO
KSD_U07	Can identify and critically analyze ethical issues in scientific research, and prepare and complete applications for bioethics committee approval in accordance with applicable standards.	P8S_UW
Social competences		
KSD_K01	Demonstrates responsibility for the quality and ethics of conducted research.	P8S_KK
KSD_K02	Promotes values related to physical culture in various social environments.	P8S_KO
KSD_K03	Engages in international scientific discussions.	P8S_KO
KSD_K04	Accepts constructive criticism and uses it to improve their research.	P8S_KK
KSD_K05	Demonstrates responsibility for the implementation of the individual research plan and for the quality of the presented results.	P8S_KK
KSD_K06	Takes responsibility for the development of others and for knowledge transfer, supporting lifelong learning and its impact on social development.	P8S_KK P8S_KR
KSD_K07	Shows commitment to activities promoting science and its role in society.	P8S_KK

Explanation of abbreviations:

KSD – discipline-specific learning outcomes at the Doctoral School
W – knowledge category
U – skills category
K – social competences category
P8S – learning outcome characteristics for level 8 (P8) of the Polish Qualifications Framework, typical for qualifications awarded within the

system of higher education and science (S)
WG – knowledge category, scope and depth – completeness of cognitive perspective and interrelations
WK – knowledge category, context – conditions and consequences
UW – skills category, application of knowledge – problems solved and tasks performed
UK – skills category, communication – receiving and producing statements, disseminating knowledge in the academic environment and using a foreign language
UO – skills category, work organization – planning and teamwork
UU – skills category, learning – planning one's own development and the development of others
KK – social competences category, evaluation – critical reflection
KR – social competences category, professional role – independence and development of professional ethos
KO – social competences category, responsibility – fulfilling social obligations and acting in the public interest
01, 02, 03 and so on – number of the learning outcome or learning outcome characteristic for level 8 of the Polish Qualifications Framework, applicable to higher education in the field of medical sciences and health sciences, and in the discipline of physical culture sciences.

Appendix No. 2. List of courses with descriptions, learning outcomes, and methods of their verification.

Lp.	Course	Type of classes	Educational objectives and content	Teaching methods and techniques	Learning outcomes	Methods of learning outcomes verification
1	**Conceptual framework of physical culture sciences**	W	The aim of the course is to familiarize doctoral students with the fundamental terms used in physical culture sciences to describe relevant issues, define their meaning, and identify their practical implications. The course also aims to enhance skills in text analysis, drawing conclusions, and freely formulating and expressing thoughts on topics related to physical culture. **Course content:** Through lectures and discussions, the following concepts will be covered: physical culture, physical culture sciences, health sciences, physical education, sport, physiotherapy, physical recreation, tourism, physical activity, measurement of physical activity, human motor skills, motor abilities, physical fitness, measurement of physical fitness, and physical fitness standards.	lecture, presentation, explanation, brainstorming	KSD_W02, KSD_U02, KSD_K02, KSD_K03	Written credit – tests (multiple-choice and open-ended questions), written statement Credit based on active participation – involvement in discussion, critical analysis of scientific content
2	**Philosophy of ethics and science**	W	The aim of the course is to familiarize students with various metaphysical assumptions adopted within the philosophy of science. It includes defining the fundamental concepts of the philosophy of science used to analyze the process of generating scientific knowledge, as well as exploring contemporary philosophical approaches aimed at increasing the credibility of scientific inquiry. The course covers the	lecture + media presentation, analysis of texts in the field of the philosophy of science, discussions on epistemological issues related to	KSD_W01, KSD_W03, KSD_U02, KSD_U07, KSD_K01, KSD_K07	Preparation of an essay on the topic: *"The problem of one's own research in the perspective of selected claims from the philosophy of science (or ethics of science)"* – 5–10 pages (10,000–

			specific nature of research in the fields of physical-biological and socio-humanistic sciences, as well as interdisciplinary studies. It introduces ethical issues arising from the processes of creating, disseminating, and applying scientific knowledge in various areas of practice. Students will develop skills in philosophical analysis of scientific texts and gain the ability to contextualize their own research topics (within the field of physical culture sciences) in the broader framework of the philosophy of science. The course also emphasizes principles of ethical creation and use of scientific knowledge. **Course content:** The origin, types, and development of scientific knowledge – a philosophical and historical analysis. Conditions and processes of scientific cognition – discovery, justification, and verification of knowledge. Methodological orientations in 20th-century science; the status of research hypotheses. Specific features of scientific cognition: research procedures, formulation of knowledge, and its properties. Research attitudes and types of scientific work; scientific schools. Ethical desiderata in science – examples. The reputation of science and the authority of scientists in light of civilizational change. The regulatory function of scientific knowledge in relation to social practices. Psychology of science as support for the philosophy and ethics of science.	ongoing research projects		20,000 characters) Discussion/defense of the theses presented in the essay

3	**Methodology of scientific work**	W	The main aim of the course is for the doctoral student to acquire the knowledge and skills necessary for effectively planning and conducting empirical scientific research in the field of physical culture sciences. **Course content:** Characteristics of scientific knowledge. The place of physical culture sciences within the classification of sciences. Stages of the research process. Characteristics and classification of research problems and hypotheses. Research problems and hypotheses in physical culture sciences. The concept and classification of variables and indicators. Characteristics of research models in physical culture sciences – correlational research, experimental model, and ex post facto model. Principles of hypothesis formulation and verification in the Fisher and Neyman-Pearson approaches (statistical hypothesis vs. research hypothesis, α, p, Type I and II error, effect size, test power). Sampling in research – types of sampling, sample size (G*Power software). Planning and developing a research project in the field of physical culture sciences. Practical guidelines for writing a scientific article.	Presentation, explanation, brainstorming	KSD_W01, KSD_W02, KSD_U01, KSD_U02, KSD_U03, KSD_K01	Oral credit (1st semester), written and oral credit (2nd semester).
4	**Statistical methods in scientific research**	ĆW	The main aim of the course is for the doctoral student to acquire knowledge and skills in statistics that enable effective data analysis using the Statistica software in the field of physical culture sciences. **Course content:** Descriptive statistics. Introduction to the Statistica software. Criteria for selecting a	Presentation, workshops – task execution in the Statistica software, explanation, brainstorming	KSD_W04, KSD_U02, KSD_U03, KSD_K05	Practical credit – execution of tasks in the Statistica software along with their discussion.

			statistical test. Parametric significance tests for independent and dependent data. Non-parametric significance tests for independent and dependent data. Measures of association strength between variables. Simple linear regression analysis. Multiple regression analysis (including stepwise predictor selection and analysis of data from correlational studies). Two-way analysis of variance (for independent and dependent data, including analysis of data from experimental research).			
5	**Formal aspects of conducting scientific research –** *Information day*	ĆW	The course covers the completion of formal requirements related to admission to the doctoral student body at the University School of Physical Education in Poznań, as well as familiarization with the organization and functioning of the Doctoral School. As part of the course, doctoral students participate in a meeting with the Vice-Rector for Science, the Director of the Doctoral School, the Chair of the Doctoral Student Council, and a representative of the library. Organizational matters, training regulations, and available scientific resources are discussed. The program also includes a tour of the university's laboratories, providing insight into the research infrastructure and opportunities for conducting research in various scientific areas.	lecture, multimedia presentation, explanation	KSD_W01, KSD_K06	Credit based on attendance.
6	**Formal aspects of conducting scientific research –** *Using literature databases*	ĆW	The aim of the course is to develop skills in reviewing, searching for, and retrieving specialist scientific literature. **Course content:** Overview of scientific literature databases available at the University. Overview of	lecture, multimedia presentation, explanation, analysis of literature databases and the ability to search for	KSD_W01, KSD_W02, KSD_U01, KSD_U02, KSD_K01	Credit based on activity – group work, participation in a discussion on the use of literature databases and the retrieval of scientific

			publicly accessible scientific literature databases. Using literature databases and the ability to efficiently narrow down/filter their content according to research interests. Retrieving relevant scientific materials (scientific articles, textbook chapters, monographs, and study guides). Accessing the above-mentioned materials using publicly available platforms and communication tools for researchers.	relevant content, creating accounts or profiles in university and publicly accessible databases		materials (scientific articles, textbook chapters, monographs, and study guides). Practical observation – assessment of the ability to navigate literature databases. Evaluation of prepared projects and presentations – presentation of key scientific articles based on literature databases within the preferred research area.
7	**Formal aspects of conducting scientific research –** *Application to the bioethics committee*	ĆW	The aim of the course is to develop the ability to independently write an application to the bioethics committee. **Course content:** Principles of conducting scientific research involving human participants in light of the Declaration of Helsinki. Principles of conducting scientific research involving animals in accordance with the requirements of the National Ethical Committee for Animal Experimentation. Types of experiments. Overview of the current procedures for submitting applications to the local bioethics/ethics committee, required documentation, and practical completion of the application. Insurance process for study participants and the research team.	lecture, multimedia presentation, explanation, analysis of applications involving human and animal participants, independent preparation and completion of the application	KSD_W01, KSD_W02, KSD_W06, KSD_U02, KSD_U07, KSD_K01	Evaluation of prepared projects and presentations – presentation of the completed application along with justification. Evaluation of the final written assignment – completed application to the bioethics committee.

8	**Formal aspects of conducting scientific research –** *Lists of scientific journals, bibliometric indicators*	ĆW	The aim of the course is to review lists of scientific journals and bibliometric indicators. **Course content:** List of scientific journals by the Ministry of Science and Higher Education (MNiSW). Recognized international journal rankings (Journal Citation Reports, Scopus). Journal and researcher evaluation metrics (MNiSW points, impact factor, h-index, number of citations/self-citations, etc.). "Predatory" journals, academic "cooperatives." Evaluation of researchers and academic institutions.	lecture, multimedia presentation, explanation, analysis of scientific journal lists and the ability to identify appropriate publishers for research dissemination, analysis of the individual achievements of selected researchers and academic institutions	KSD_W01, KSD_W02, KSD_U02, KSD_K01	Credit based on activity – group work, participation in a discussion on the use of scientific journal lists. Practical observation – assessment of the ability to use scientific journal lists, evaluation of the academic achievements of supervisors and selected researchers.
9	**Formal aspects of conducting scientific research –** *The publication process (peer-reviewed journals), Principles of determining co-authorship of scientific publications, The phenomenon of predatory publishers/journals*	ĆW	The aim of the course is to provide practical information on the principles of preparing and submitting a manuscript to a peer-reviewed scientific journal, as well as to highlight potential conflicts associated with the publication process. **Course content:** Publication databases and quality indicators. Types of scientific articles and criteria for selecting scientific journals. Fake and predatory publishers and journals. Publication costs and the Open Access system. Scientific journal submission systems. Structure of a scientific article. Author guidelines. Principles of correspondence with the journal's editorial board. The role of journal editors and reviewers. Rules for responding to reviews. Ethical issues: contribution to the preparation	lecture and multimedia presentation, analysis of grant proposals, preparation of projects, use of online systems and databases	KSD-W01, KSD_W03, KSD_U04, KSD_U07, KSD_K01, KSD_K05	Credit based on activity – participation in discussion, critical analysis of issues related to good publishing practices. Practical observation – assessment of skills in real conditions: use of online systems for managing scientific journals. Evaluation of prepared projects (drafting a cover letter to the editorial board, creating a detailed formal layout of an article) – assessment of the ability

			of publications, citation principles, and conflict of interest.			to prepare publication materials.
10	**Formal aspects of conducting scientific research –** *Research funding (institutions)*	ĆW	The aim of the course is to discuss the principles of preparing a research project proposal and to analyze opportunities for obtaining funding for scientific research. **Course content:** Overview of the rules for awarding funding – criteria and requirements in available calls organized by the Ministry, the National Science Centre (NCN), the National Centre for Research and Development (NCBR), the Polish National Agency for Academic Exchange (NAWA), and other possible sources. Discussion of the OSF system and preparation of the applicant's profile. Importance of proposal components and their weight in the overall evaluation.	lecture, multimedia presentation, explanation, analysis of available calls for young researchers, examples of successfully funded proposals	KSD_W06, KSD_U06, KSD_U07, KSD_K04, KSD_K07	Credit based on activity – individual and group work Practical observation – assessment of the preparation of an individual proposal, taking into account requirements, personal experience, and awareness of gaps
11	**Formal aspects of conducting scientific research –** *Preparing a grant proposal*	ĆW	The aim of the course is to provide practical guidance on preparing and completing grant applications. **Course content:** Objectives, types, and rules for selecting grant competitions. Online grant management systems. Grant application instructions and forms. Deadlines and principles for grant proposal evaluation. Key elements of the project description and budget (guidelines and common mistakes). Data management plan. Required declarations and ethical considerations.	lecture and multimedia presentation, analysis of grant applications, project preparation, use of online systems and databases	KSD_W01, KSD_W03, KSD_W06, KSD_U03, KSD_U04, KSD_U07, KSD_K01	Credit based on activity – participation in discussion, critical analysis of issues related to the key elements of developing a scientific project. Practical observation – assessment of skills in real conditions: use of online grant management systems. Evaluation of prepared projects (drafting a grant proposal based on

						the formal structure of a selected call, preparing a sample budget) – assessment of proposal development skills.
12	**Formal aspects of conducting scientific research –** *Research project management*	ĆW	The aim of the course is to develop competencies necessary for managing a research project. **Course content:** Principles of managing one's own research project. Responsibilities of the beneficiary depending on the source of funding. Cooperation with university units in the implementation of a research project. Selection of the research team (guidelines and common mistakes). Reporting progress in ongoing research. Management of the IPB (individual research plan).	lecture, multimedia presentation, explanation, analysis of selected projects from the management perspective, management of one's own project.	KSD_W01, KSD_W02, KSD_U01, KSD_U03, KSD_U06, KSD_K01, KSD_K05	Credit based on activity – group work, participation in discussion on research project management. Practical observation – discussions on managing one's own research project. Evaluation of prepared projects – individual research plan management project.
13	**Formal aspects of conducting scientific research –** *Leading a research team, collaboration.*	ĆW	The aim of the course is to develop competencies necessary for leading a research project. **Course content:** Managing a research team (tools and methods). Teamwork and principles of collaboration. Work schedule and communication rules. Leading teams with various structures – simple (within a single institution) and complex (national and international).	lecture, multimedia presentation, explanation, analysis of sample research teams from a management perspective, management of one's own team within the framework of the individual research plan	KSD_W01, KSD_W02, KSD_U01, KSD_U06, KSD_K01, KSD_K05	Credit based on activity – group work, participation in discussion on leading a research team. Practical observation – discussions on managing one's own research project. Evaluation of prepared projects – leading a research team within the framework of the individual research plan.

14	**Formal aspects of conducting scientific research –** *Research commercialization, entrepreneurship.*	ĆW	The aim of the course is to develop the ability to assess the potential for research commercialization and to cooperate with external entities. **Course content:** Definitions of commercialization, the process of direct commercialization – technology transfer center. The commercialization process and the technology offer. Revenue from commercialization. Benefits for the institution and the researcher. Projects and publication of R&D results. Licensing agreements and sales contracts. Types of patent research.	lecture, multimedia presentation, explanation, analysis of selected cases of research commercialization, inspiration to revise past and analyze future scientific research, attempt to commercialize one's own research findings.	KSD_W01, KSD_W02, KSD_W06, KSD_U03, KSD_K06, KSD_K07	Credit based on activity – group work, participation in discussion on the use of scientific journal lists. Practical observation – discussions on the commercialization process of various research findings. Evaluation of prepared projects – proposal for the commercialization of one's own research.
15	**Formal aspects of conducting scientific research –** *Presentation and self-presentation workshops.*	ĆW	The aim of the course is to: develop skills in creating and delivering presentations from the perspective of self-presentational behavior; consciously construct a coherent message on verbal, non-verbal, and content levels; build social adaptability in academic and teaching activities; and foster reflection on various methods of shaping public image (e.g., presentations at seminars, scientific conferences, and teaching activities). **Course content:** Motives, selected strategies, and styles of self-presentation; verbal, non-verbal, and behavioral tools for self-presentation; methods of shaping public image; features of effective communication; structure of a presentation.	lecture, presentation, explanation, workshops, simulations, teamwork	KSD_U04, KSD_K05, KSD_K07	Evaluation of prepared projects and presentations – assessment of the ability to develop and deliver content.

16	**Pedeutology**	ĆW	The aim of the course is to familiarize doctoral students with the components constituting teacher professionalism in the context of continuously updated knowledge, skills, and attitudes; to develop reflectiveness, authenticity, and engagement in academic and teaching work; and to foster the ability to participate in a dialogical learning process that provides all participants with space and inspiration to co-create knowledge. **Course content:** Scope of competencies of research and teaching staff, sources of change, and the socio-cultural perspective. The constellation of predispositions, skills, and knowledge of academic teachers; recognizing one's own potential. Stages of professional development of academic teachers in relation to L. Kohlberg's concept of moral development. Learning styles in D. Kolb's latest theory. Components of the social learning theory. The new professionalism of research and teaching staff. The academic teacher as a reflective practitioner. What kind of support does a young teacher/researcher need? The role of the teacher-researcher in dialogical learning/teaching.	ecture, presentation, explanation, case analysis, brainstorming, project-based method, workshops, simulations, teamwork	KSD_W05, KSD_U05, KSD_K06	Credit based on activity – group work, critical analysis of scientific content, participation in a panel discussion.
17	**Academic/specialist english**	ĆW	Improving practical English language proficiency to a level that enables its use in scientific work, including reading and studying specialist literature, preparing a manuscript for	language course in the form of practical classes, analysis of lexical and	KSD_U04, KSD_K03	Graded credit; assessment components include semester and midterm tests on

			scientific publication, preparing and delivering a scientific presentation, participating in scientific discussions within one's field of specialization, and using English in other situations related to academic activity.	grammatical issues based on the current coursebook and its digital version, as well as the instructor's own materials, pair work, group work, discussion		listening comprehension, lexical and grammatical tests, active participation in conversations and discussions during classes, and written assignments based on digital materials.
18	**Journal club**	ĆW	The aim of the course is to analyze scientific articles, including original research papers and review articles related to the student's ongoing research. The course provides substantive preparation for writing a review article and for presenting one's own research results. **Course content:** Selection and discussion of a review article relevant to the student's research, including the protocol on which the review is based. Discussion and presentation of research findings from an experimental paper written by an authority in the student's research field. Selecting journals for submitting one's own articles. Preparing the introduction for a thesis defense presentation based on the latest research. Preparing to present one's own research results and participate in discussions during academic trips and international conferences.	lecture, multimedia presentation, explanation, analysis of international scientific literature, analysis of submission requirements for one's own articles	KSD_W01, KSD_U01, KSD_U02, KSD_U04, KSD_K04, KSD_K05	Credit based on activity – group work, participation in discussions on the analysis of research results presented by other authors and one's own research. Practical observation – assessment of the scientific reliability of presented works, including the applied research methods. Evaluation of prepared presentations – presentation of key scientific articles serving as a comparison and discussion reference for one's own research.
19	**Artificial intelligence (AI) in scientific research**	ĆW	**Course objective:** The aim of the course is to develop skills in using artificial intelligence (AI) for data analysis, automation of research processes, and optimization of scientific work. Doctoral	interactive lectures combined with case study analysis, practical workshops on the use of AI	KSD_W01, KSD_W02, KSD_W04, KSD_U01,	Credit based on attendance and completion of the following:

			students will become familiar with modern AI tools and their practical applications across various scientific disciplines, with particular attention to ethical and legal considerations. **Course content:** Upon completing the course, doctoral students will be able to: Understand key AI methods, including machine learning, neural networks, natural language processing, and image analysis. Use AI in research data analysis, including Big Data exploration, pattern recognition, and predictive modeling. Automate research processes by applying AI to experiment planning, data processing, and research result management. Use advanced AI tools for automated text analysis and statistics. Critically assess and implement AI in scientific research, taking into account its limitations, ethical issues, and legal regulations. Apply AI practically in their scientific discipline by conducting a research project based on artificial intelligence methods.	tools and data analysis, teamwork on research projects, independent literature review, and automated analysis of scientific texts	KSD_U02, KSD_K01	Research project – development and implementation of an AI-based solution in a selected research area, including assessment of methodological accuracy and interpretation of results. Presentation of results – discussion of the applied AI techniques, analysis of their effectiveness, and conclusions drawn from the research.
20	**Semester seminar**	S	The aim is to present the current state and progress of work on the research problem outlined in the doctoral dissertation, and to support doctoral students through professional, critical, and constructive discussion among researchers from various disciplines and all doctoral students of the Doctoral School. The seminar is organized in an open format, with the participation of interested parties or invited guests from within and outside the University.	discussion on the doctoral student’s presentation	KSD_W01, KSD_U04, KSD_U06, KSD_K04	Credit based on the preparation and delivery of the presentation as well as the doctoral student's written responses to questions in the form of a report.

21	**Mid-term seminar with the evaluation committee (as part of the mid-term evaluation)**	S	The seminar constitutes the open part of the mid-term evaluation of the doctoral student's Individual Research Plan (IRP) at the end of the fourth semester of training. The objective is to present the research activities completed according to the IRP schedule before a committee appointed by the University's Academic Council. The seminar is open in format, meaning that in addition to the committee, it may be attended by all interested individuals and invited guests from within and outside the University.	discussion on the doctoral student's presentation	KSD_U01, KSD_K01	Credit based on the presentation of the implementation of the Individual Research Plan (IRP).
22	**Professional practice: conducting teaching activities**	P	Doctoral students conduct teaching sessions with student groups as lecturers or assist in such classes. The aim is to familiarize them with the specifics of academic teaching work in terms of content, organization, and pedagogy. The doctoral student selects or is assigned to classes according to their professional competencies, educational profile, and the needs of the University.	Independent teaching or assisting in conducting teaching activities.	KSD_W05, KSD_U05, KSD_K06, KSD_K07	Credit based on the submitted documentation of the internship completion.

W – lecture
ĆW – exercises
S – seminar
P – practice

Profile of a lecturers at the Doctoral School at Poznań University of Physical Education

Name and surname: Prof. Piotr Krutki

Faculty of Health Sciences, Department of Biological Sciences, Department of Neurobiology

Contact: phone: + 48 61 8 35 54 39; e-mail: krutki@awf.poznan.pl

History of scientific advancement	- 2009, professor of biological sciences, - 2001, habilitation in biological sciences, speciality: neurophysiology, - 1997, PhD in biological sciences.
Bibliometric data	- 1082 citations, - H-index = 17, - IF = 213,306.
Main research areas	1. organization of spinal cord neuronal networks, 2. neural pathways involved in motor control, 3. plasticity of the neuromuscular system: neuronal and muscular effects of various form of training and decreased or decreased motor activity, 4. mathematical modelling of motor unit and muscle contraction, 5. electrophysiology of motoneurons and motor units, electromyography, 6. biomarkers and effects of physiotherapy in spinal pain syndromes.
Didactics in the Doctoral School	1. preparation of the grant application, 2. publication process.
Publications	1. **Krutki, P**., Jankowska, E., & Edgley, S. A. (2003). Are crossed actions of reticulospinal and vestibulospinal neurons on feline motoneurons mediated by the same or separate commissural neurons? Journal of Neuroscience, 23, 8041–8050. 2. Raikova, R., Celichowski, J., Pogrzebna, M., Aladjov, H., & **Krutki, P**. (2007). Modeling of summation of individual twitches into unfused tetanus for various types of rat motor units. Journal of Electromyography and Kinesiology, 17, 121–130. 3. **Krutki, P.**, Jelen, S., & Jankowska, E. (2011). Do premotor interneurons act in parallel on spinal motoneurons and on dorsal horn spinocerebellar and spinocervical tract neurons in the cat? Journal of Neurophysiology, 105(4), 1581–1593. 4. **Krutki, P**., Ciechanowicz-Kowalczyk, I., Łochyński, D., & Celichowski, J. (2013). Effect of aging on properties of motor unit action potentials in the rat medial gastrocnemius muscle. Journal of Electromyography and Kinesiology, 23(5), 1150–1157. 5. **Krutki, P.**, Hałuszka, A., Mrówczyński, W., Gardiner, P. F., & Celichowski, J. (2015). Adaptations of motoneuron properties to chronic compensatory muscle overload. Journal of Neurophysiology, 113(7), 2769–2777. 6. **Krutki, P.**, Mrówczyński, W., Bączyk, M., Łochyński, D., & Celichowski, J. (2017). Adaptations of motoneuron properties after weight-lifting training in rats. Journal of Applied Physiology, 123, 664–673. 7. Raikova, R., Celichowski, J., Angelova, S., & **Krutki, P.** (2018). A model of the rat medial gastrocnemius muscle based on inputs to motoneurons and on an algorithm for prediction of the motor unit force. Journal of Neurophysiology, 120, 1973–1987. 8. Bączyk, M., Drzymała-Celichowska, H., Mrówczyński, W., & **Krutki, P.** (2020). Polarity-dependent adaptations of motoneuron electrophysiological properties after 5-wk transcutaneous spinal direct current stimulation in rats. Journal of Applied Physiology, 129(4), 646–655. 9. Drzymała-Celichowska, H., Celichowski, J., Bączyk, M., & **Krutki, P.** (2022). The electrophysiological properties of hindlimb motoneurons do not differ between male and female rats. European Journal of Neuroscience, 56(3), 4176–4186.

	10. Ratajczak, M., Waszak, M., Śliwicka, E., Wendt, M., Skrypnik, D., Zieliński, J., & **Krutki, P.** (2023). In search of biomarkers for low back pain: Can traction therapy effectiveness be prognosed by surface electromyography or blood parameters? Frontiers in Physiology, 14, 1290409.
Conferences	126 conference presentations, 19 as a plenary lecturer, among others.: 1. International Motoneuron Society Meeting, 2. Annual Congress of the European College of Sport Science (ECSS), 3. International Congress of Physiological Sciences (IBRO), 4. FENS Forum, 5. International Society of Electrophysiology and Kinesiology, 6. International Symposium on Motor Control, 7. International Congress of the Polish Neuroscience Society, 8. International Congress of the Polish Physiological Society, 9. The Physiological Society Symposium, 10. International Conference on Strength Training, 11. ICB Seminar. Motoneurons: their Inputs and Outputs, 12. Bulgarian Society of Biomechanics.
Research visits	1. Visiting Professor of Physiology, specializing in neurophysiology, Department of Neuroscience and Physiology, Göteborg University, Göteborg, Sweden, June 2014 – June 2019, 2. Spinal Cord Research Centre, University of Manitoba, Winnipeg, Canada, April 2011, May-June 2014, 3. Department of Physiology and Neuroscience, Sahlgrenska Academy, Göteborg University, Göteborg, Sweden, March-April 2009, September 2012, November 2012, March 2013 and October 2013, 4. Institute of Physiology and Pharmacology, Göteborg University, Göteborg, Sweden, August-December 2002, February-April 2004, 5. Institute of Physiology, Göteborg University, Göteborg, Sweden, January-July 1994 6. annual research visits (3 to 10 days) at the Institute of Biophysics and Biomedical Engineering, Bulgarian Academy of Sciences, Sofia, Bulgaria, 2004-2024.
Research grants	**Principal Investigator:** 1. 2023-2026: The National Science Centre grant OPUS 2022/45/B/NZ7/00102 – *"Adaptations of proprioceptive input from muscle spindles to motoneurons in response to strength and endurance training"* 2. 2018-2021: The National Science Centre grant OPUS 2017/25/B/NZ7/00373: *„Modulation of electrophysiological properties of the spinal cord motoneurons in response to trans-spinal direct current stimulation (tsDCS)"*, 3. 2012-2015: The National Science Centre grant HARMONIA N/NZ4/00190: *"Influence of a chronic muscle overload on properties of motoneurons and motor units"*, 4. 2009-2012: The Ministry of Science and Higher Education research grant N N404 042136: *„Physiological and biochemical aspects of the vibration training on the motor system*", 5. 2005-2006: The Ministry of Science and Informatization research grant MNiI P05D 109 29: „*The effects of ageing on the force regulation of motor units*".
	Investigator: 1. 2019-2022: The National Science Centre grant OPUS 2018/31/B/NZ7/01028: „*Sex differences in main structures of the stretch reflex: motoneurons and muscle spindles*"; 2. 2018-2021: The National Science Centre grant OPUS 2017/27/B/NZ7/01113: „*Adaptation of electrophysiological properties of rat spinal motoneurons to changes in neurotrophic factors in blood serum and skeletal muscles*", 3. 2014-2017: The National Science Centre grant OPUS 2013/11/B/NZ7/01518: „*The motor unit plasticity in the strength training*", 4. 2014-2016: The National Science Centre grant OPUS 2013/09/B/NZ7/02555: " *Influence of the endurance treadmill training on contractile properties of motor units in relation to changes in expression of muscle proteins*",

	5. 2014-2016: The Ministry of Science and Higher Education grant RSA2 041 52: "*Monitoring and optimalization of the training process in high-class sportsmen with respect to physical efficiency, motor technique and psychological support. New methodological research under actual training conditions*", 6. 2013-2016: The National Science Centre grant 2013/08/M/NZ7/00787: "*Influence of a chronic muscle overload on properties of motoneurons and motor units*", 7. 2008-2011: The Ministry of Science and Higher Education research grant N N404 027035: „*The significance of the neuronal code in motor control*", 8. 2004-2007: The Polish Committee for Scientific Research grant 2 P05A 09227: " *Dynamics of changes of hind limb muscles activity and properties of motor units after the spinal cord injury*", 9. 2004-2007: The Polish Committee for Scientific Research grant 2 P05D 02927: "*Summation of motor unit forces in the regulation of muscle contraction",* 10. 1999-2001: The Polish Committee for Scientific Research grant 4 P05D 06116: " *Activity of motor units and interactions between centres of motor control*", 11. 1995-1997: The Polish Committee for Scientific Research grant 4 P05D 09408: "*Structure and function of motor units and centres of motor control*", 12. 2003-2023: research grants in co-operation between the Polish Academy of Science and the Bulgarian Academy of Sciences in Sofia: - "*Summation of muscle contractions in an unfused tetanus*" (2003-2005); - "*Experimental investigation and modelling of individual contractions of motor units and their summation into tetanus*" (2006-2008); - "*Experimental and modelling investigation of forces developed by motor units*" (2009-2011); - "*Development of a rat muscle model composed by realistic number of motor units and its experimental and modelling investigation by application of different patterns of MUs stimulation*" (2012-2014); - "*A realistic muscle model composed by motor units and its experimental verification – models of force developing and motor units recruitment*" (2015-2017); - "*The model of skeletal muscle and simulation of muscle activity*" (2018-2020); - "*Modelling of non-linearities in force generation of motor units in skeletal muscles*" (2021-2023).
	Grant supervisor: 1. 2011-2013: The National Science Centre grant PRELUDIUM N/NZ4/04901: „*Influence of a 5-week vibration training on electrophysiological properties of spinal hind limb motoneurons*".
Awards	1. 2010: Jędrzej Śniadecki Medal for scientific achievements, 2. 2003: Jędrzej Śniadecki Medal for scientific achievements, 3. 2003: Award of the Minister of Education and Sport.
Experience in academic supervision	1. supervisor of PhD students: 4, 2. participation in doctoral, habilitation or professorship procedures: - reviewer of 12 professorships, 11 habilitations, and one PhD, - chairperson of 4 habilitation committees, - chairman or member of a dozen of doctoral committees.
Membership in scientific associations	1. PNS (Polish Neuroscience Society): - 1994-now: PNS member, - 2011-2013: member of the Board of the PNS, 2. 1998-now: member of FENS (Federation of European Neurophysiological Societies), 3. 1994-now: member of IBRO (International Brain Research Organization), 4. PTF (Polish Physiological Society):

	- 1994-2005: member, - 1999-2005: the Secretary of the Poznan Division, 5. 1994-2005: member of IUPS (International Union of Physiological Societies), 6. 1994-1998: member of ENA (European Neuroscience Association).
Expert activity	Expert of the National Centre of Research and Development for national and international projects: 1. 2019-2021: Smart Growth Operational Program – POIR, 2. 2008-2020: long-term research and development program *"Improvement of safety and working conditions"*, 3. 2013-2020: strategic research and development program *„Prevention practises and treatment of civilization diseases STRATEGMED",* 4. 2020: international program NEURON COFOUND, 5. 2020: program Poland-Norway, 6. 2020-2021: program LIDER, 7. 2019-2020: program ERA-NET, 8. 2015: program Poland-RPA, 9. 2015, 2017: program Poland-Turkey, 10. 2014: program SOCIAL INNOVATIONS, 11. 2014-2016: program INNOTECH. Expert of the National Science Centre for evaluation of projects within the framework of national or international initiatives: 1. 2018-2020: program PRELUDIUM, 2. 2021: program OPUS, 3. 2019, 2020, 2022-2025: program MINIATURA. Expert of the European Union in the programme for development and innovations: "*Operational Programme Intelligent Development*" (PO IR 2014-2020). 2014: Expert Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Romania. 2025: Expert for the European Union programme ERA-NET NEURON "*Multinational and Translational Research Projects on Interdisciplinary Approaches to the Neuroscience of Pain*" (program coordinator: German Federal Ministry of Education and Research).
Organizational activities	1. 2018-now: member of the University Council at the Poznań University of Physical Education, 2. 2018-now: member of the Scientific Board at the Poznań University of Physical Education, 3. 2016-now: Disciplinary Proceedings Representative for Academic Teachers at the Poznań University of Physical Education, 4. 2024-now: member of the Senate Evaluation Committee for Academic Teachers at the Poznań University of Physical Education, 5. 2016-2024: Chairperson of the Senate Committee for Awards and Honours at the Poznań University of Physical Education, 6. 2016-2025: Vice-Chairperson of the Appeal Evaluation Committee for Academic Teachers at the Poznań University of Physical Education, 7. 2010-2016 – member of the Local Ethics Committee on the Animal Experiments in Poznań, 8. 2005-2012: member of the Senate Disciplinary Committee at the University School of Physical Education in Poznań, 9. 2005-2007: - the chairperson of the Senate Disciplinary Committee at the University School of Physical Education in Poznań, 10. 2003-now: member of the Editorial Committee at the Poznań University of Physical Education, 11. 2016-2020: member of Senate of the Poznań University of Physical Education.

Name and surname: Prof. Assoc. Krzysztof Kusy

Faculty Of Sport Sciences, Chair of Sport Kinesiology, Department of Athletics, Strength and Conditioning

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History of scientific advancement	- 2013, habilitation in physical sciences, - 1999, PhD in physical sciences.
Bibliometric data	- 818 citations, - H-index = 16, - IF = 172,020.
Main research areas	1. masters sport as a model of lifelong physical activity supporting physical fitness and health, 2. identification of new indicators and markers in the process of adaptation to exercise and sports training.
Didactics in the Doctoral School	1. semester seminars, 2. formal aspects of practicing science (information day, use of literature databases, publication process).
Publications	1. **Kusy, K.**, Matysiak, J., Zarębska, E. A., Klupczyńska-Gabryszak, A., Ciekot-Sołtysiak, M., Plewa, S., Kokot, Z. J., Dereziński, P., & Zieliński, J. (2024). Changes in plasma concentration of free proteinogenic and non-proteinogenic amino acids in high-performance sprinters over a 6-month training cycle. Journal of Clinical Medicine, 13(17), 5300. https://doi.org/10.3390/jcm13175300 2. **Kusy, K.**, Matysiak, J., Kokot, Z. J., Ciekot-Sołtysiak, M., Klupczyńska-Gabryszak, A., Zarębska, E. A., Plewa, S., Dereziński, P., & Zieliński, J. (2024). Exercise-induced response of proteinogenic and non-proteinogenic plasma free amino acids is sport-specific: A comparison of sprint and endurance athletes. PLOS ONE, 19(8), e0309529. https://doi.org/10.1371/journal.pone.0309529 3. **Kusy, K.**, Ciekot-Sołtysiak, M., Matysiak, J., Klupczyńska-Gabryszak, A., Plewa, S., Zarębska, E. A., Kokot, Z. J., Dereziński, P., & Zieliński, J. (2024). Changes in plasma free amino acid profile in endurance athletes over a 9-month training cycle. Metabolites, 14(7), 353. https://doi.org/10.3390/metabo14070353 4. Archacki, D., Zieliński, J., Pospieszna, B., Włodarczyk, M., & **Kusy, K.** (2024). The contribution of energy systems during 15-second sprint exercise in athletes of different sports specializations. PeerJ, 12, e17863. https://doi.org/10.7717/peerj.17863 5. Trinschek, J., Zieliński, J., Zarębska, E. A., & **Kusy, K.** (2023). Male and female athletes matched for maximum oxygen uptake per skeletal muscle mass: Equal but still different. Journal of Sports Medicine and Physical Fitness, 63(1), 95–103. https://doi.org/10.23736/S0022-4707.22.13985-1 6. **Kusy, K.**, Błażejewski, J., Gilewski, W., Karasek, D., Banach, J., Bujak, R., Zieliński, J., Sinkiewicz, W., & Grześk, G. (2021). Aging athlete's heart: An echocardiographic evaluation of competitive sprint vs endurance-trained master athletes. Journal of the American Society of Echocardiography, 34(11), 1160–1169. https://doi.org/10.1016/j.echo.2021.06.005 7. **Kusy, K.**, & Zieliński, J. (2015). Sprinters versus long-distance runners: How to grow old healthy. Exercise and Sport Sciences Reviews, 43(1), 57–64. https://doi.org/10.1249/JES.0000000000000034 8. **Kusy, K.**, & Zieliński, J. (2014). Aerobic capacity in speed-power athletes aged 20–90 years vs endurance runners. Scandinavian Journal of Medicine & Science in Sports, 24(1), 68–79. https://doi.org/10.1111/j.1600-0838.2012.01499.x 9. **Kusy, K.**, Zieliński, J., & Pilaczyńska-Szcześniak, Ł. (2013). Insulin sensitivity and β-cell function by HOMA2 model in sprint-trained athletes vs endurance runners and untrained participants aged 20–90 years. Journal of

	Sports Sciences, 31(15), 1656–1664. https://doi.org/10.1080/02640414.2013.792946 10. **Kusy, K.**, Król-Zielińska, M., Domaszewska, K., Kryściak, J., Podgórski, T., & Zieliński, J. (2012). Gas exchange threshold in male speed-power vs endurance athletes ages 20–90 years. Medicine and Science in Sports & Exercise, 44(12), 2415–2422. https://doi.org/10.1249/MSS.0b013e318268b252
Conferences	1. 3rd International Conference Sport Kinetics, Poznań, Polska, University School of Physical Education in Poznań, Institute of Sport, Warsaw, Poland, 8-11 September, 1993, 2. International Conference on Physical Education and Sports of Children and Youth, Bratislava, Slovakia, Slovak Scientific Society for Physical Education and Sports, Faculty of Physical Education and Sports, Comenius University, 13-16 August, 1995, 3. 6th Sport Kinetics Conference: "*Theories of Human Motor Performance and their Reflections in Practice*", Ljubljana, Slovenia, University of Ljubljana, Faculty of Sport, 1-4 September, 1999 (featured speech), 4. 64th American College of Sports Medicine (ACSM) Annual Meeting, Denver, Colorado, USA, 30 May – 3 June, 2017, 5. 22nd Annual Congress of the European College of Sport Science (ECSS): "*Sport Science in a Metropolitan Area*", Metropolis Ruhr, Germany, 5-8 July, 2017.
Research visits	1. Academy of Physical Education and Sports of the Republic of Belarus in Minsk, Department of Athletics, Mińsk, Poland, 14-31 March, 1994, 2. Otto-von-Guericke Universität, Fakultät for Gesites-, Sozial, und Erziehungswissenschaften, Institut für Sportwissenschaft, Magedburg, Germany, 8-14 November, 2004, 3. Scientific research during the 16th World Masters Athletics Championships, San Sebastian, Spain, August 22-September 3, 2005 (in collaboration with Prof. Jörn Ritwweger, Manchester Metropolitan University, and other researchers), 4. University of Bologna, Faculty of Exercise and Sport Sciences, Campus di Rimini, Rimini, Italy, 11-15.09.2006, 5. European Masters Athletics Championships Indoor, Research project entitled "Athlete's heart" – "*The usefulness of ultrasound examination of the heart and blood vessels and spirometry in assessing the structure and function of the heart muscle and respiratory system in competitive athletes over 35 years of age (master athletes) participating in various athletics competitions*" Toruń, Poland, March 22-28, 2015 (in cooperation with the Second Department of Cardiology, Faculty of Health Sciences, Collegium Medicum in Bydgoszcz – Nicolaus Copernicus University in Toruń), 6. Olympic Training Centre in Cetniewo – training camp for the Polish national sprint team, Cetniewo, Poland, August 1-7, 2015 (measurements taken during actual training sessions), 7. Doctoral project of M.J., M.A., in 2015-2018 (measurements of exercise response during 10 international tournaments held in Poland, Greece, Croatia, and the Netherlands), 8. Complexo Desportivo Vila Real de Santo António – training camp for the athletics sprint team before the European Championships in Amsterdam, Monte Gordo, Portugal, May 4-15, 2016 (measurements taken during actual training sessions), 9. Olympic Preparation Centre in Zakopane – training camp for the Polish Olympic taekwondo and boxing teams before the Olympic Games in Rio de Janeiro, Zakopane, Poland, July 1-13, 2016 (measurements taken during actual training sessions), 10. Olympic Preparation Centre in Spała, training camp for Polish national team sprinters, Spała, Poland, June 18-20, 2017 (kinematic measurements in take-over zones, analysis of biochemical indicators), 11. World Masters Athletics Indoor Championships, international research project "*Assessment of physical fitness and health of masters athletes over 35*

	years of age - benefits and risks associated with long-term training" Toruń, Poland, March 26-April 1, 2023 (in cooperation with researchers from Polish and international centres), 12. European Masters Athletics Championships Indoor, international research project "*Assessment of physical fitness and health of masters athletes over 35 years of age - benefits and risks associated with long-term training*", Toruń, Poland, March 17-23, 2024 (in cooperation with researchers from the University of Physical Education in Warsaw).
Research grants	**Principal Investigator:** 1. 2018-2023: National Science Centre grant OPUS 14 (2017/27/B/NZ7/02828): "*The effect of long-term adaptation to intensive speed-strength and endurance training on the concentration of free amino acids in plasma at rest, during graded exercise, and during post-exercise recovery*" (in cooperation with: Poznań University of Medical Sciences, Department of Inorganic and Analytical Chemistry), 2. 2014-2016: Ministry of Science and Higher Education (RSA2 041 52): "*Monitoring and optimization of the training process of high-class athletes in terms of physical performance, movement technique, and psychological support. Research using modern methods in real training conditions*".
	Principal collaborator: 1. 2015-2017: Ministry of Science and Higher Education (N RSA3 03653): "*Supporting speed and coordination training for high-class athletes with particular emphasis on direct start preparation*", 2. 2014-2016: National Science Centre grant OPUS 5 (2013/09/B/NZ7/02556): "*Changes in the metabolism of nucleotides and their derivatives in the blood under the influence of long-term physical training*" (cooperation: Poznań University of Medical Sciences, Gdańsk Medical University), 3. 2024–2027: Ministry of Education and Science as part of the Science for Society II program (NdS-II/SP/0364/2023/01): "*Systematic activity as a guarantee of healthy bones*".
	Collaborator: 1. 2017–2018: European Regional Development Fund, Operational Program Smart Growth for 2014–2020 (project ANG/ZK/1/2017, number POIR.01.01.01-00-0540/15-00): "*Assessment of early changes in epidermal fluorescence as an indicator of NADH accumulation in mitochondria during tissue preconditioning in a model of repeated, short-term, and controlled ischemia-reperfusion of the upper limb in healthy individuals. Determination of the relationship between indicators of autonomic cardiovascular modulation and the dynamics of epidermal fluorescence changes during preconditioning induction*" (collaboration: ANGIONICA sp. z o.o, Interdepartmental Institute of Radiation Technology, Faculty of Chemistry, Lodz University of Technology), 2. 2016-2017: A new technique for assessing microvascular circulation: Flow Mediated Skin Fluorescence (FMSF). Construction of a prototype device and its clinical verification. Research task: "*Verification, as part of a research experiment, of an innovative method for assessing the condition of the vascular endothelium – Flow Mediated Skin Fluorescence (FMSF), based on NADH fluorescence, following changes in blood flow in blood vessels, in physically active healthy individuals and highly trained athletes*" (cooperation: ANGIONICA sp. z o.o, Interdepartmental Institute of Radiation Technology, Faculty of Chemistry, Lodz University of Technology), 3. 2015–2018: Ministry of Science and Higher Education (0026/RS3/2015/53): "*Methods supporting and limiting adaptive changes in sports training*" (cooperation: Institute of Sport PIB in Warsaw, Jędrzej Śniadecki Academy of Physical Education and Sport, Gdańsk, Polish Tennis Association), 4. 2010–2015: Ministry of Science and Higher Education (NN404515938): "*Research on musculoskeletal loads in selected expressive elements of contemporary and classical dance using methods of identifying forces generated by muscles*,"

	5. 2010-1011: Ministry of Science and Higher Education (NN404 191536): "*Purine metabolism and antioxidant potential in competitive athletes – the influence of age, athletic level, and sport discipline*".
Awards	1. 2014: Jędrzej Śniadecki Gold Medal awarded by the Rector of the Poznań University of Physical Education for a series of monothematic scientific articles entitled "*Aging and health in the light of the speed-power physical training model. Research on competitive athletes aged 20-94*", 2. 2010: Jędrzej Śniadecki Silver Medal awarded by the Rector of the Poznań University of Physical Education for collective work, a series of monothematic scientific articles entitled "*Physiological mechanisms and health effects of training in competitive sports on the example of athletes of different ages*", 3. 2000: Second degree award from the Rector of the Poznań University of Physical Education for scientific achievements and work for the community.
Experience in academic supervision	3. supervisor of PhD students: 2, 4. participation in doctoral, habilitation or professorship procedures: - reviewer of 7 doctoral dissertations, - member of 4 habilitation procedures in the field of sport sciences.
Membership in scientific associations	1. 2025: member of the Jury of the Wielkopolska Province Marshal's Award Competition "*Wielkopolska for the Planet 2030*", 2. 2024-present: member of the Scientific Council of the City of Poznań, 3. since 2025: member of the Scientific Council of the Doctoral School of the Medical University of Poznań, 4. 2017-2023: member of the Scientific Council of the Institute of Sport PIB in Warsaw (appointed by the Minister of Sport), 5. 2015-2018: elected member of the Committee for Rehabilitation, Physical Culture and Social Integration of the Faculty of Medical Sciences of the Polish Academy of Sciences, 6. 2015-present: elected member of the Kinesiology Committee of the Polish Academy of Sciences in Poznań, 7. since 2014: elected member of the Committee on Fundamental Problems of Physical Culture of the Polish Academy of Sciences in Poznań, 8. 2008: external expert of the National Foresight Program "*Poland 2020*", launched in December 2006 by the Minister of Science and Higher Education, rounds I and II, 9. 2003: member of the International Association of Sport Kinetics.
Expert activity	1. Approximately 90 reviews of articles from scientific journals in the fields of exercise physiology, sports medicine, and sports training. These reviews were published in indexed international periodicals, including the highest-rated journals in their respective fields. The list is in alphabetical order: - Acta of Bioengineering and Biomechanics, - Journal of Kinesiology and Exercise Sciences, - Applied Physiology, - Nutrition and Metabolism, - Applied Sciences, - Archives of Gerontology and Geriatrics, - Baltic Journal of Health and Physical Activity, - BMC Sports Science, - Medicine and Rehabilitation, - Cells, - Central European Journal of Sport Sciences and Medicine, - Disability and Rehabilitation, - European Journal of Applied Physiology, - Frontiers in Cardiovascular Medicine, - Frontiers in Endocrinology, - Frontiers in Physiology, - Frontiers in Sports and Active Living, - Human Movement,

	- International Journal of Sports Medicine, - Journal of Applied Gerontology, - Journal of Functional Morphology and Kinesiology, - Journal of Sport and Health Science, - Journal of Sports Medicine and Physical Fitness, - Journal of Sports Sciences, - Medicine and Science in Sports and Exercise, - Minerva Cardiology and Angiology, - Open Access Journal of Sports Medicine, - Physiology International. 2. Review Editor in Frontiers in Endocrinology, section Bone Research.
Organizational activities	1. For the 2024–2028 term at the Poznań University of Physical Education: - Vice-Rector for Cooperation and Development, member of the Senate, - elected member of the University Electoral College, - member of the Senate Committee for Awards and Distinctions, - member of the Scientific Council, - Chair of the University Strategy Development Team, - Head of the Department of Athletics, Strength and Conditioning. 2. For the 2020–2024 term at the Poznań University of Physical Education: - Chair of the University Election Committee, - elected member of the University Electoral College, - Director of the Doctoral School (chair of the admissions committee and chair of the scholarship committees), - Member of the Senate Appeals Committee for the Evaluation of Academic Teachers, - Member of the University Competition Committee for the position of professor and professor at the University School of Physical Education, - Member of the Scientific Council, - Head of the Department of Athletics, Strength and Conditioning. 3. For the 2016–2020 term at the Poznań University of Physical Education: - elected member of the University Electoral College, - member of the Senate, - member of the Rector's College, - member of the Senate Science Committee / Scientific Council, - Head of the Doctoral Program at the Faculty of Physical Education, Sport and Rehabilitation, - member of the University Appeals Assessment Committee for Academic Teachers, - member of the Faculty Competition Committee, - member of the Faculty Committee for the Physical Education Study Program, - Head of the Department of Athletics, Strength and Conditioning.

Name and surname: Prof. Assoc. Maciej Tomczak

Faculty of Sport Sciences, Chair of Physical Activity, Department of Pedagogy

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History of scientific advancement	- 2014, habilitation in physical sciences, - 2005, PhD in physical culture sciences.
Bibliometric data	- 893 citations, - H-index = 15, - IF = 126,585.
Main research areas	1. psychosocial and motor determinants of performance effectiveness in sports, 2. psychosocial determinants of health behaviours with particular emphasis on physical activity, 3. methodological and statistical determinants of research process effectiveness in physical sciences.
Didactics in the Doctoral School	1. research methodology, 2. since 2016: statistical methods used in scientific research (for doctoral students at Poznań University of Physical Education), 3. 2019: statistical methods used in scientific research (for doctoral students at Poznań University of Physical Education (for employees at Poznań University of Physical Education), 4. in previous years: conducting classes in statistical data analysis for doctoral students of the Faculty of Psychology and Cognitive Science at Adam Mickiewicz University Poznań (according to the Prof. Jerzy Brzeziński invitation).
Publications	1. **Tomczak, M.**, Kleka, P., Tomczak-Łukaszewska, E., Bojkowski, Ł., & Walczak, M. (2024). Validation and personality conditionings of the 3×2 achievement goal model in sport. Scientific Reports, 14(1), 1588. https://doi.org/10.1038/s41598-024-XXXXX 2. **Tomczak, M.**, Walczak, M., Brola, W., Walczak, A., Koper, M., Chmielewski, B., & Wilski, M. (2024). Physical activity as a mediator in the relationship between health locus of control and health-related quality of life in multiple sclerosis patients with different disease duration. Disability and Health Journal, 17(4), 101638. https://doi.org/10.1016/j.dhjo.2024.101638 3. **Tomczak, M.**, Kleka, P., Walczak, A., Bojkowski, Ł., Gracz, J., & Walczak, M. (2022). Validation of Sport Anxiety Scale-2 (SAS-2) among Polish athletes and the relationship between anxiety and goal orientation in sport. Scientific Reports, 12(1), 12281. https://doi.org/10.1038/s41598-022-XXXXX 4. Kalinowski, P., Bojkowski, Ł., Śliwowski, R., Wieczorek, A., Konarski, J., & **Tomczak, M.** (2020). Mediational role of coping with stress in relationship between personality and effectiveness of performance of soccer players. International Journal of Sports Science & Coaching, 15(3), 354–363. https://doi.org/10.1177/1747954120918262 5. Witkowski, M., **Tomczak, M.**, Karpowicz, K., Solnik, S., & Przybyla, A. (2020). Effects of fencing training on motor performance and asymmetry vary with handedness. Journal of Motor Behavior, 52(1), 50–57. https://doi.org/10.1080/00222895.2019.1570105 6. Behnke, M., **Tomczak, M.**, Kaczmarek, L. D., Komar, M., & Gracz, J. (2019). The sport mental training questionnaire: Development and validation. Current Psychology, 38, 504–516. https://doi.org/10.1007/s12144-017-9624-0 7. Dowd, K. P., Szeklicki, R., Minetto, M. A., Murphy, M. H., Polito, A., Ghigo, E., van der Ploeg, H. P., Ekelund, U., Maciaszek, J., Stemplewski, R., **Tomczak, M.**, & Donnelly, A. E. (2018). A systematic literature review of reviews on techniques for physical activity measurement in adults: A DEDIPAC study. International Journal of Behavioral Nutrition

	and Physical Activity, 15, 15. https://doi.org/10.1186/s12966-017-0636-2 8. Witkowski, M., **Tomczak, M.**, Bronikowski, M., Tomczak, E., Marciniak, M., & Borysiuk, Z. (2018). Visual perception strategies of foil fencers facing right-versus left-handed opponents. Perceptual and Motor Skills, 125(3), 612–625. https://doi.org/10.1177/0031512518771214 9. **Tomczak, M.**, & Tomczak, E. (2014). The need to report effect size estimates revisited: An overview of some recommended measures of effect size. Trends in Sport Sciences, 21(1), 19–25. https://doi.org/10.23829/TSS.2014.21.1-3 (number of citations: 2171), 10. **Tomczak, M.** (2013). Styl rywalizacji a efektywność działania w sportach walki: analiza psychologiczna (monograph of Poznań University of Physical Education, nr 423, s. 297).
Conferences	1. FEPSAC Congress of European Federation of Sport Psychology,: "*Psychometric properties of the Polish version Sport Motivation Scale, Psychometric properties of the Polish version of Task and Ego Orientation In Sport Questionnaire*" (M. Tomczak, M. Walczak – poster), Madera, Portugal, 12-17 July, 2011, 2. Experimental Methods in Language Acquisition Research (EMLAR 7): "*Effects of sports experience on the processing of action language and motion metaphors: A pilot study*" (M. Tomczak, E. Tomczak – poster), Utrecht, Netherlands, February, 2011, 3. Devision of Sport and Exercise Psychology: "*Competition style as a mediator in the relationship between psychological characteristics and effectiveness of actions in combat sports*" (poster), Manchester, England, 16-17 December, 2013, 4. The Role of Psychological Factors in Athletic Career Development: "*Athlete Activities as Mediators Between Psychological Characteristics and Athletic Performance*" (invited lecture), University of Physical Education in Kraków, Kraków, Poland, May 29, 2014, 5. Physical Activity, Fitness, and Nutrition – for Health, Quality of Life, and the Prospects for Scientific Integration: "*Inappropriate Eating Behaviors of Dietetics Students from a Psychological Perspective*" (M. Tomczak, M. Walczak – poster), Poznań University of Physical Education, Poznań, Poland, May 21, 2015, 6. European Federation of Sport Psychology (FEPSAC): "*Judokas and fencers compared for a mediational relation: psychological characteristics – activity of athletes – effectiveness*" (M. Tomczak, M. Walczak – poster), Bern, Switzerland, 14-19 July, 2015, 7. Around Statistical Models: "*Some Practical Considerations on Interaction Effects in Regression Analysis – Introduction to Moderation Analysis*" (lecture), Institute of Psychology, Adam Mickiewicz University Poznań, Poznań, Poland, September 18, 2015 8. Fencing from a Scientific and Training Perspective: "*What Activities in the Competitive Process of Fencing Promote High Efficiency and Why*?" (lecture), Adam Mickiewicz University Poznań, Poznań, Poland, June 3, 2016, 9. 32 Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS): "*Illness perception in multiple sclerosis. Sociodemographic, illness related and psychosocial correlates*" (M. Tomczak, M. Wilski – poster), London, England, 14-17 September 2016, 10. Fencing from a Scientific and Training Perspective: "*Visual Perception Strategies During Foil Fencing Duels with Right- and Left-Handed Opponents – Preparatory Activities*" (M. Tomczak, M. Witkowski – poster), Adam Mickiewicz University Poznań, Poland, June 1, 2017. 11. 2nd National Conference on Contemporary Challenges in Finance and Accounting: conducting workshops on the methodology of writing a thesis, University of Applied Sciences in Konin, April 2018.

	12. 2nd Gastroenterology Conference – Students for Students: "*Emotions and Stress as Factors Supporting or Disrupting Our Actions*" Poznań University of Medical Sciences, March 10, 2018. 13. The 15th European Congress of Sport and Exercise Psychology – Building the Future of Sport and Exercise Psychology: „*The sport mental training questionnaire: development and validation*" (M. Tomczak, M. Behnek, Ł. Kaczmarek, J. Gracz, M. Komar – poster), Münster, Germany, 15-20 June, 2019, 14. 35th Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS2019): "*Perception of multiple sclerosis impact and self-management in patients with multiple sclerosis: mediating effect of coping strategies"* (M. Tomczak, M. Wilski, W. Brola – poster), Stockholm, Sweden, 11-13 September, 2019, 15. Rehabilitation Congress, lecture in the section "*Psychology in Rehabilitation – Searching for Solutions to Controversial Problems*": "*The Explanatory and Prognostic Function of Psychological Research on the Effects of Rehabilitation Interventions*," Łódź, Poland, September 19, 2019. 16. Interdisciplinary Scientific Conference "*Health-Sport-Beauty*": "*Psychological Conditioning of Success in Sport*" (lecture), University of Applied Sciences in Konin, May 16, 2019. 17. Physical Education – Teaching Methodology and Applications: "*Psychological Conditioning of Performance in Table Tennis*" (lecture), University of Applied Sciences in Konin, April 12, 2022, 18. 4th Interdisciplinary Scientific Conference "*Health-Sport-Beauty*", Health Prevention: "*Psychological Determinants of Health*" (lecture), Institute of Natural Fibres and Medicinal Plants - National Research Institute in Poznań, Poland, October 18, 2022.
Research visits	1. Academy of Physical Education in Kraków, Department of Sport Theory and Methodology, Department of Combat Sports Theory and Methodology, December 2008 (internship supervisor: Prof. Stanisław Sterkowicz), 2. Academy of Physical Education in Wrocław, Department of Management and Coaching, December 2009 (internship supervisor: Prof. Ryszard Panfil), 3. Multiple visits at the Faculty of Psychology and Cognitive Science at Adam Mickiewicz University Poznań – research activity (result: numerous common scientific publications) and conducting statistic classes for doctoral students, 4. Study visits at the Clinic and Department of Gastroenterology, Dietetics, and Internal Medicine – research collaboration (result: common scientific publications).
Research grants	**Subcontractor:** 1. 2016-2019: Ministry of Science and Higher Education (N RSA4 04854): "*Criteria for the selection of athletes for multi-person teams in water sports from a multi-factor approach*" (project manager: PhD Jarosław Janowski from Poznań University of Physical Education), 2. 2015-2017: Ministry of Science and Higher Education (N RSA3 04253): "*Application of multi-faceted coordination training in improving precision and visual perception among fencers*" (project manager: PhD Mateusz Witkowski from Adam Mickiewicz University Poznań), 3. 2013-2016: project carried out within the framework of an international consortium entitled DEDIPAC - the Knowledge Hub on the Determinants of Diet and Physical Activity, National Centre for Research and Development grant no. 4/JPI HDHL DEDIPAC KH/2014: "*Determinants of dietary behaviour and physical activity. European knowledge centre for the integration and development of research infrastructure*" (project manager: Prof. Assoc. Robert Szeklicki from Poznań University of Physical Education).

Awards	1. 2022: Silver Cross of Merit – for contributions to the development and promotion of sports, 2. 2021: IJBNPA AWARD 2021 – a collective award from the International Society for Behavioural Nutrition and Physical Activity (ISBNPA) together with co-authors of the publication entitled: "*A systematic literature review of reviews on techniques for physical activity measurement in adults: a DEDIPAC study*", for the most frequently cited paper published in 2018 in the International Journal of Behavioural Nutrition and Physical Activity (5-year IF 2023: 7.5) in the "Most Cited Review Paper" category (the paper is frequently used in the field of physical activity measurement, number of citations: 496). 3. 2020: Medal of the National Education Commission, 4. 2018: Bronze Cross of Merit for contributions to the development and promotion of sports, 5. three-time medallist of the World Fencing Championships, two-time medallist of the European Fencing Championships, multiple medallist of the Polish Fencing Championships (sabre fencer) in various age categories.
Experience in academic supervision	1. supervisor of PhD students: 2, 2. participation in doctoral, habilitation or professorship procedures: - reviewer of two PhD, - member of three habilitation committees: twice as a reviewer, once as secretary of the habilitation commission, - member of one habilitation committee, - chairman or member of a dozen of doctoral committees in the discipline of physical sciences (Poznań University of Physical Education).
Membership in scientific associations	Activities in the area of social physical culture: 1. member of the Board of the Wielkopolska Sports Association, 2. member of the Board of the Wielkopolska District Fencing Association, 3. member of the Board of the Konin Fencing Club, 4. fencing coach and from 1988 to 2004 fencer (sabre fencer) of the Konin Fencing Club, three-time World Championship medallist and two-time European Championship medallist in various age categories.
Expert activity	Numerous reviews of articles from scientific journals in the psychology and physical culture. The list is in alphabetical order: 1. Disability and Rehabilitation, 2. International Journal of Sport and Exercise Psychology, 3. Journal of Sport Behaviour, 4. Multiple Sclerosis and Related Disorders, 5. Plos One, 6. Scientific Reports, 7. Psychology of Sport and Exercise (4 reviews).
Organizational activities	1. 2024-present: member of the Senate of the Poznań University of Physical Education, 2. 2024-present: member of the Senate Committee for the Evaluation of Academic Teachers, 3. since 2024: member of the Senate Committee for Awards and Distinctions, 4. 2023-2026 and 2019-2022: Chairman of the Kinesiology Committee of the Poznań Department of the Polish Academy of Sciences, 5. 2022: Chairman of the committee for the mid-term evaluation of individual research plans of doctoral students, 6. member of recruitment committees for the Doctoral School of the Poznań University of Physical Education, 7. 2019-present: member of the Scientific Council of the Poznań University of Physical Education, 8. 2019-present: member of the Scientific Council of the University of Physical Education in Poznań,

	9. 2019: co-organization of the scientific conference entitled "*100 Years of the University of Physical Education in Poznań – on the Past and Future of Physical Culture Sciences*", April 26 2019 (co-organizer: Kinesiology Committee of the Polish Academy of Sciences in Poznań), 10. 2015: co-organizer of the scientific conference entitled "*Around Statistical Models*", September 18, 2015 (Department of Psychology, Poznań University of Physical Education and the Institute of Psychology, Adam Mickiewicz University Poznań commonly with PhD Paweł Kleka), 11. 2014-present: Head of the Department of Psychology at the Poznań University of Physical Education, 12. organizer of open scientific meetings with lectures and discussions as part of his activities in the Kinesiology Committee of the Polish Academy of Sciences in Poznań (elected position for a term), 13. chairman of the Kinesiology Committee of the Polish Academy of Sciences in Poznań (organizer and co-organizer of open scientific meetings with lectures and discussions).

Name and surname: Prof. Assoc. Agata Wiza

Faculty of Sport Sciences, Chair of Physical Activity, Department of Pedagogy

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History of scientific advancement	- 2014, habilitation in social sciences, - 2005, PhD in physical culture sciences.
Bibliometric data	- 35 citations., - H-index = 3, - IF = 15,003.
Main research areas	1. individual tourism (backpacking) in the context of non-formal education, 2. socio-emotional competences of youth, 3. well-being and collective or individual efficacy of teachers.
Didactics in the Doctoral School	1. presentation and self-presentation workshops, 2. fundamentals of pedeutology.
Publications	1. Wiza, A. (2013). Uczenie się z podróży w narracjach turystów indywidualnych (backpackersów). AWF Poznań. 2. Koszałka-Silska, A., Korcz, A., & Wiza, A. (2021). The impact of physical education based on the adventure education programme on self-esteem and social competences of adolescent boys. International Journal of Environmental Research and Public Health, 18(6), 3021. https://doi.org/10.3390/ijerph18063021 3. Koszałka-Silska, A., Korcz, A., & Wiza, A. (2021). Correlates of social competences among Polish adolescents: Physical activity, self-esteem, participation in sports and screen time. Sustainability, 13(24), 13845. https://doi.org/10.3390/su132413845 4. Lugue Gonzales, R., Romera, E., Gómez-Ortiz, O., Wiza, A., Laudańska-Krzemińska, I., Antypas, K., & Muller, S. (2022). Emotional intelligence and school climate in primary school children in Spain, Norway and Poland. Psychology, Society & Education, 14(3), 1–9. https://doi.org/10.25115/psye.v14i3.6549 5. Florkowski, R., Wiza, A., & Banaszak, E. (2022). The Rogerian student-centered learning approach and the democratization of education. Polish Sociological Review, 218(2), 273–288. https://doi.org/10.26412/psr218.07 6. Wiza, A., Koszałka-Silska, A., Jaguszewski, M., et al. (2023). Polish adaptation of multisource assessment of children's social competence. Scientific Reports, 13, 12128. https://doi.org/10.1038/s41598-023-39292-2 7. Banaszak, E., Florkowski, R., Laudańska-Krzemińska, I., Lubczyńska, A., & Wiza, A. (2023). The socio-emotional competencies of students: A guide for teachers. Wydawnictwo Naukowe Scholar. https://doi.org/10.7366/9788367450386 8. Gunnes, M., Muller, S., Romera-Félix, E. M., Laudańska-Krzemińska, I., Luque-González, R., Wiza, A., & Antypas, K. (2024). School climate during the COVID-19 pandemic in three European countries: A cross-sectional pre-post quasi-experimental study. International Journal of Educational Research Open, 7, 100336. https://doi.org/10.1016/j.ijedro.2024.100336 9. Camacho, A., Romera, E., Gómez-Ortiz, O., Antypas, K., Muller, S., Laudańska-Krzemińska, I., & Wiza, A. (2025). Does school climate contribute to psychological adjustment? The role of resilience during childhood. Child Indicators Research. https://doi.org/10.1007/s12187-025-10255-5.
Conferences	1. 4th International Adventure Therapy Conference: "*Educational needs and examples of outdoor activities in Poland*", Rotorua, New Zeeland, 1-5 February, 2006, 2. Critical Issues in Leisure & Tourism Education: Current Trends and Developments in Pedagogy and Research, Great Britain, Missenden

	Abbey, 2006 (Employee training in tourism and recreation on the example of the Faculty of Tourism and Recreation of the University of Physical Education in Poznań), 3. Backpacker mobilities? An expert conference on backpacker tourism: "*Learning from travelling as narrated by backpackers*", Shimla, India, 26-28 March, 2008, 4. Supporting mental health in the EU in pandemic and post-pandemic, Interregional Group on Health & Well-being Topic, participation in panel discussion, Belgium, Brussel, 25 November, 2021, 5. BOOST Final Conference and consortium meeting (participation in panel discussion), Belgium, Brussel, 23 May, 2023.
Research visits	-
Research grants	**Principal Investigator:** 1. 2018-2023: Project Horyzont 2020: "*Building social and emotional skills to BOOST mental health resilience in children and young people in Europe (755175)*".
	Investigator: 1. 2004-2006: member of an international research project financed by the European Union – Non Formal Education through Outdoor Activities (107562-5.1.XL-UK-01).
Awards	1. 2001, 2004: Rector's Award 2nd degree for exemplary performance of duties as an academic teacher and Vice-Dean for Studies at the Faculty of Transport and Infrastructure, 2. 2024: Rector's Award for highly rated scientific publications published in 2023.
Experience in academic supervision	1. supervisor of PhD students: 1, 2. participation in doctoral, habilitation or professorship procedures: - chairperson of a dozen doctoral committees, - once as secretary of the habilitation commission in the discipline of physical sciences.
Membership in scientific associations	1. 2015–present: member of the Scientific Council of Studia Periegetica, 2. 2006–present: member of the Backpacking Research Group, ATLAS, 3. 2002–present: member of the Polish Scientific Association for Recreation Animation and Tourism.
Expert activity	Numerous reviews of articles from scientific journals in the fields of tourism, pedagogy, and physical culture. The list is in alphabetical order: 1. Dyskursy Młodych Andragogów, 2. Forum Oświatowe, 3. Studia Peregietica, 4. Turystyka Kulturowa.
Organizational activities	1. 2024-present: member of the Scientific Council, 2. 2016-2018: member of the Senate Committee on Science, 3. 2009-2013: member of the Committee of the Quality of Education at Faculty of Tourism and Recreation, 4. 2006-2017: member of the Senate of the University of Physical Education in Poznań, 5. 2002-2005: Vice-Dean for studies at the Faculty of Tourism and Recreation, University of Physical Education in Poznań, 6. 1999-2002: Vice-Dean for part-time and evening Studies at the Faculty of Tourism and Recreation, University of Physical Education in Poznań.

Name and surname: Prof. Ewa Ziemann

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History of scientific advancement	- 2021, professor in health sciences, - 2014, habilitation in physical sciences, - 2002, PhD in physical sciences.
Bibliometric data	- 1425 citations, - H-index = 20, - IF = 167,196.
Main research areas	1. factors that limit or support adaptive physiological changes resulting from various forms of physical exertion, with respect to general health and physical performance. Interest is placed on the endocrine function of skeletal muscles as a key modulator of these processes, 2. the role of whole body cryostimulation as a complementary intervention to physical exercise and as an independent method for inducing beneficial metabolic changes.
Didactics in the Doctoral School	3. Journal Club, 4. formal aspects of science funding.
Publications	1. Capodaglio, P., Alito, A., Duguè, B. M., Bouzigon, R., Lombardi, G., Miller, E. D., Verme, F., Modaffari, G., Piterà, P., **Ziemann, E.**, & Fontana, J. M. (2025). Contraindications to whole-body cryostimulation (WBC): A position paper from the WBC Working Group of the International Institute of Refrigeration and the multidisciplinary expert panel. Frontiers in Rehabilitation Sciences, 4, 1567402. https://doi.org/10.3389/fresc.2025.1567402. 2. Kortas, J. A., Reczkowicz, J., Juhas, U., **Ziemann, E.**, Świątczak, A., Prusik, K., Olszewski, S., Soltani, N., Rodziewicz-Flis, E., Flis, D., Żychowska, M., Gałęzowska, G., & Antosiewicz, J. (2024). Iron status determined changes in health measures induced by Nordic walking with time-restricted eating in older adults: A randomised trial. BMC Geriatrics, 24(1), 300. https://doi.org/10.1186/s12877-024-04876-8. 3. Gerosa, L., Malvandi, A. M., Gomarasca, M., Verdelli, C., Sansoni, V., Faraldi, M., **Ziemann, E.**, Olivieri, F., Banfi, G., & Lombardi, G. (2024). Murine myoblasts exposed to SYUIQ-5 acquire senescence phenotype and differentiate into sarcopenic-like myotubes: An in vitro study. The Journals of Gerontology: Series A, 79(4), glae022. https://doi.org/10.1093/gerona/glae022. 4. Rodziewicz-Flis, E. A., Kawa, M., Kaczor, J. J., Szaro-Truchan, M., Flis, D., Lombardi, G., & **Ziemann, E.** (2023). Changes in selected exerkines concentration post folk-dance training are accompanied by glucose homeostasis and physical performance improvement in older adults. Scientific Reports, 13, 35583. https://doi.org/10.1038/s41598-023-35583-w. 5. Gomarasca, M., Micielska, K., Faraldi, M., Flis, M., Perego, S., Banfi, G., **Ziemann, E.**, & Lombardi, G. (2022). Impact of 12-week moderate-intensity aerobic training on inflammasome complex activation in elderly women. Frontiers in Physiology, 13, 792859. https://doi.org/10.3389/fphys.2022.792859. 6. Kozłowska, M., Kortas, J. A., Żychowska, M., Antosiewicz, J., Zuczek, K., Perego, S., Lombardi, G., & **Ziemann, E.** (2021). Beneficial effects of whole-body cryotherapy on glucose homeostasis and amino acid profile are associated with a reduced myostatin serum concentration. Scientific Reports, 11, 86430. https://doi.org/10.1038/s41598-021-86430-9. 7. Kujach, S., Olek, R. A., Byun, K., Suwabe, K., Sitek, E., **Ziemann, E.**, Laskowski, R., & Soya, H. (2019). Acute sprint interval exercise increases both cognitive functions and peripheral neurotrophic factors in humans: The

	possible involvement of lactate. Frontiers in Neuroscience, 13, 1455. https://doi.org/10.3389/fnins.2019.01455. 8. Lombardi, G., **Ziemann, E.**, & Banfi, G. (2017). Whole-body cryotherapy in athletes: From therapy to stimulation—An updated review of the literature. Frontiers in Physiology, 8, 258. https://doi.org/10.3389/ fphys.2017.00258. 9. Dulian, K., Laskowski, R., Grzywacz, T., Kujach, S., Flis, D., Smaruj, M., & **Ziemann, E.** (2015). The whole body cryostimulation modifies irisin concentration and reduces inflammation in middle-aged, obese men. Cryobiology, 71(3), 398–404.https://doi.org/10.1016/j.cryobiol.2015. 10.143. 10. **Ziemann, E.**, Olek, R. A., Kujach, S., Grzywacz, T., Antosiewicz, J., Garsztka, T., & Laskowski, R. (2012). Five-day whole-body cryostimulation, blood inflammatory markers, and performance in high-ranking professional tennis players. Journal of Athletic Training, 47(6), 664–672. https://doi.org/10.4085/1062-6050-47.6.13.
Conferences	1. 31st Scientific Congress of the Polish Society of Sports Medicine: „Does cold therapy is *cool*?" (lecture), Zielona Góra, Poland, 17-19 September, 2015, 2. 8th International Mediterranean Meeting Obesity and diabetes, epidemiology and pathogenesis Italian, Japanese and Polish Meeting promoted by Associazione Italiana di Dietetica e Nutrizione Clinica and University Medical School of Gdańsk: "*Whole-body cryostimulation as an effective method of reducing low-grade inflammation in obese men*" (wykład), Gdańsk, Poland, 25-27 May, 2016, 3. Conference of Olympic Training Coaches — Tokyo 2020, "*Recommendations for Cooling Procedures and Cryotherapeutic Treatments to Accelerate Post-Exercise Recovery and Optimize Athlete Preparation for Competition in High Temperature and Humidity Conditions"* (Lecture), Spała, Poland, 20-22 November, 2017, 4. II Congress European Nutrition Sport Society: "*Vitamin D and its role in adaptation to exercise*" (Lecture for the invitation), Milano, Italy, 25 November, 2017, 5. I Congress European Nutrition Sport Society: "*High intensity training and cognitive performance*" (Lecture for the invitation), Milano, Italy, 23-25 March, 2018, 6. Conference of Olympic Winter Sports Training Coaches: "*Cryotherapy – Application in Training and Recovery"* (lecture), Szczyrk, Poland, 14-16 May 2018, 7. Open Days of the National Science Center - sixth edition: "Basic research the essence of science" (lecture), Gdańsk, Poland, 9-10 May, 2018, 8. Biomedia Whole-Body cryostimulation an update on the latest research and clinical use: "*Whole-Body cryostimulation-polish experience*" (Lecture for the invitation), Milano, Italy, 2 December, 2022, 9. 26th International Congress of Refrigeration: "*The effects of high intensity interval training combined with the whole body cryostimulation on brain-derived neurotrophic factor and tryptophan metabolism*" (Lecture), Paris, France 21-25 August, 2023, 10. International Conference on the Treatment of Spasticity: „*How muscle react on WBC? – analgetic effect & potential benefits in metabolism*" (Lecture by invitation), Łódź, Poland, 4-5 October, 2024.
Research visits	1. University of Padova, Department of Physiology, Padova, Italy, 2-30 November, 2012 (Research and teaching internship within the framework of the Jędrzej Śniadecki Academy of Physical Education and Sport Internationalization Program, contract number POKL.04.01.01-00-144/09-03), 2. University of Padova, Department of Physiology, Padova, Italy 1 August to 2 September, 2013 (Research and teaching internship within the framework of the Jędrzej Śniadecki Academy of Physical Education and Sport Internationalization, contact number POKL.04.01.01-00-144/09-03).

Research grants	**Principal investigator:** 1. 2018-2021: The National Science Centre grant OPUS 13 (2017/25/B/NZ7/02309): „*Short to long effects of whole body cryostimulation on insulin sensitivity among overweight: translational controlled trial investigating coldness and training effects on endocrine regulation on energy metabolism*", 2. 2014-2018: The National Science Centre grant OPUS 8 (2014/15/B/NZ7/00976): „*Nordic Walking as an effective way in reducing the low grade systemic inflammation in elderly people - the significance of iron and vitamin D status*", 3. 2014: Ministry of Sport and Tourism (2014.031/40/BP/DWM): „*Establishing new indicators for monitoring training loads in different age groups of tennis players*".
	Principal collaborator: 1. 2021-2026: The National Science Centre grant OPUS 19 (2020/37/B/NZ7/01794): „*The impact of time restriction eating and endurance training on health markers in older women*". 2. 2018-2023: The National Science Centre grant OPUS 15 (2018/29/B/NZ7/02094): „*Inflammasome - related pathways activation in peripherial blood mononuclear cells and their induced signalling in skeletal muscle cells in response to physical activity -an in vivo-to in vitro translator study*", 3. 2013-2016: Ministry of Science and Higher Education (0016RS2 2013 52): „*Supporting the training process and the exercise capacity of athletes*." 4. 2012-2014: Ministry of Science and Higher Education (N RSA1 002851): „*Effectiveness of interval training in selected sports - physiological evaluation of adaptive changes*".
	Grant supervisor: 1. 2017-2019: The National Science Centre grant PRELUDIUM 12 (2016/23/N/NZ7/02479): „*Health-promoting effects of high-intensity interval training with body resistance in a group of women of different ages - the role of adipokines and myokines*".
Awards	1. 2016: Rector's Award of the Academy of Physical Education and Sport in Gdańsk for substantive supervision of the Student Scientific Circle of Physiology, the winner of the Red Rose competition for the best scientific circle in the Tri-City area.
Experience in academic supervision	1. supervisor of PhD students: 5 (all with distinction), 2. participation in doctoral, habilitation or professorship procedures: chair of 1doctoral commission, 3. member of the Council for Scientific Excellence (in polish Rada Doskonałosci Naukowej) in the discipline of physical culture sciences (Medical and Health Sciences Division, Group III); served as Chair of habilitation committees on behalf of the RDN; 4. physiologist of the Polish Athletic Association, responsible for the preparation of Olympic champion Anita Włodarczyk.
Membership in scientific associations	1. participants of European Group of Experts of The Whole Body Cryostimulation.
Expert activity	Expert of the National Agency for Academic Exchange (NAWA): 1. 2025: Edition of Polish Return. Expert for the National Science Centre, responsible for evaluating research projects submitted under national and international programs and initiatives. 1. 2023: Founding Call PRELUDIUM Bis 2023, 2. 2022-2023: Founding Call MINIATURA, 3. 2019-2022: Founding Calls OPUS i SONATA, 4. 2018: Founding Calls PRELUDIUM i MINIATURA, 5. 2015: Founding Calls PRELUDIUM i SONATA. Expert at the Ministry of Science and Higher Education: 1. 2016: Participation in projects under the Academic Sports Development Program.

	Others: 1. Since 2017: Member of the Scientific Council of the Institute of Sport, Member of the Committee for Pre-Degree Education at the Polish Chamber of Physiotherapists.
Organizational activities	1. 2024-2028: member of the Team of the Council for Scientific Excellence in the fields of Medical Sciences and Health Sciences, 2. 2016-2019: Vice-Dean of the Faculty of Rehabilitation and Kinesiology at the Academy of Physical Education and Sport in Gdańsk, 3. 2015-2019: Head of the Department of Physiology and Pharmacy at the Academy of Physical Education and Sport in Gdańsk, 4. since 2010: physiologist at the Polish Athletic Association.

Compositions of recruitment committees during the evaluation period

Academic year	The act establishing the recruitment committee	Composition of the recruitment committee	Justification of the selection recruitment committee members in the context to guaranteeing and ensuring a high standard of recruitment procedure
2019/2020	Resolution of the Scientific Council of September 19, 2019	Prof. Assoc. Krzysztof Kusy (Chairman) Prof. Alicja Nowak Prof. Assoc. Piotr Gronek Prof. Assoc. Joanna Majerczak D. Sc. Ida Laudańska-Krzemińska Prof. Assoc. Włodzimierz Mrówczyński Prof. Assoc. Maciej Tomczak M. Sc. Lidia Wojtkowiak-Świadek (secretary) M. Sc. Michał Janowski (representative of PhD students) M. Sc. Karolina Czerny (foreign language instructor)	According to the Senate Resolution no. 133/2019 (section 2, subsection 2) the member of the recruitment committee for Doctoral School could be: • Professor, Associate Professor or Doctor of Science – possibility to vote is permitted, • Secretary (possibility to vote is not allowed). Besides, during the recruitment procedure the above-mentioned members are present: • representative of PhD students, • foreign language instructor as adviser.
2020/2021	Resolution of the Scientific Council of September 4, 2020 (no. 71/IX/2020)	Prof. Assoc. Krzysztof Kusy (Chairman) Prof. Assoc. Ewa Ziemann Prof. Assoc. Janusz Maciaszek Prof. Assoc. Piotr Gronek Prof. Assoc. Hanna Drzymała-Celichowska Prof. Assoc. Joanna Karolkiewicz Prof. Assoc. Dawid Łochyński M. Sc. Lidia Wojtkowiak-Świadek (secretary) M. Sc. Bartosz Malak (representative of PhD students) M. Sc. Karolina Czerny (foreign language instructor)	According to the Senate Resolution no. 180/2020 (section 2, subsection 2) the member of the recruitment committee for Doctoral School could be: • Professor, Associate Professor or Doctor of Science – possibility to vote is permitted, • Secretary (possibility to vote is not allowed). Besides, during the recruitment procedure the above-mentioned members are present: • representative of PhD students, • foreign language instructor as adviser.
2021/2022	Resolution of the Scientific Council of June 2, 2021	Prof. Assoc. Krzysztof Kusy (Chairman) Prof. Assoc. Adam Kantanista Prof. Assoc. Joanna Karolkiewicz Prof. Assoc. Robert Olek Prof. Assoc. Maciej Tomczak Prof. Alicja Nowak Prof. Ewa Ziemann M. Sc. Lidia Wojtkowiak-Świadek (secretary) M. Sc. Norbert Grzelak (representative of PhD students) M. Sc. Karolina Czerny (foreign language instructor)	According to the Senate Resolution no. 29/2021 (section 3, subsection 2) the member of the recruitment committee for Doctoral School could be: • Professor, Associate Professor or Doctor of Science – possibility to vote is permitted, • Secretary (possibility to vote is not allowed). Besides, during the recruitment procedure the above-mentioned members are present: • representative of PhD students, • foreign language instructor as adviser.

2022/2023	Resolution of the Scientific Council of September 6, 2022 (no. 305/IX/2022)	Prof. Assoc. Krzysztof Kusy (Chairman) Prof. Piotr Krutki Prof. Alicja Nowak Prof. Assoc. Marcin Andrzejewski Prof. Assoc. Robert Olek Prof. Assoc. Rafał Stemplewski Prof. Assoc. Maciej Tomczak M. Sc. Lidia Wojtkowiak-Świadek (secretary) M. Sc. Mateusz Ludwiczak (representative of PhD students) M. Sc. Karolina Czerny (foreign language instructor)	According to the Senate Resolution no. 105/2022 (section 3, subsection 2) the member of the recruitment committee for Doctoral School could be: • Professor, Associate Professor or Doctor of Science – possibility to vote is permitted, • Secretary (possibility to vote is not allowed). Besides, during the recruitment procedure the above-mentioned members are present: • representative of PhD students, • foreign language instructor as adviser.
2023/2024	Resolution of the Scientific Council of July 4, 2023 (no. 393/VII/2023)	Prof. Assoc. Krzysztof Kusy (Chairman) Prof. Piotr Krutki Prof. Assoc. Małgorzata Bronikowska Prof. Assoc. Katarzyna Domaszewska Prof. Assoc. Joanna Gorwa Prof. Assoc. Ida Laudańska-Krzemińska Prof. Assoc. Maciej Tomczak M. Sc. Lidia Wojtkowiak-Świadek (secretary) M. Sc. Natalia Główka (representative of PhD students) M. Sc. Karolina Czerny (foreign language instructor)	According to the Senate Resolution no. 154/2023 (section 3, subsection 2) the member of the recruitment committee for Doctoral School could be: • Professor, Associate Professor or Doctor of Science – possibility to vote is permitted, • Secretary (possibility to vote is not allowed). Besides, during the recruitment procedure the above-mentioned members are present: • representative of PhD students, • foreign language instructor as adviser.
2024/2025	Resolution of the Scientific Council of July 2, 2024 (no. 480/VII/2024)	Prof. Assoc. Maciej Wilski (Chairman) Prof. Ewa Ziemann Prof. Janusz Maciaszek Prof. Assoc. Marcin Bączyk Prof. Assoc. Joanna Karolkiewicz Prof. Assoc. Piotr Kocur Prof. Assoc. Maciej Tomczak M. Sc. Lidia Wojtkowiak-Świadek (secretary) M. Sc. Dominika Moszczyńska (representative of PhD students) M. Sc. Karolina Czerny (foreign language instructor)	According to the Senate Resolution no. 210/2024 (section 3, subsection 2) the member of the recruitment committee for Doctoral School could be: • Professor, Associate Professor or Doctor of Science – possibility to vote is permitted, • Secretary (possibility to vote is not allowed). Besides, during the recruitment procedure the above-mentioned members are present: • representative of PhD students, • foreign language instructor as adviser.

2025/2026	Resolution of the Scientific Council of May 27, 2025 (no. 569/V/2025)	Prof. Assoc. Maciej Wilski (Chairman) Prof. Ewa Ziemann Prof. Piotr Krutki Prof. Assoc. Joanna Karolkiewicz Prof. Assoc. Maciej Tomczak Prof. Assoc. Rafał Stemplewski Prof. Assoc. Piotr Kocur PhD Lilianna Hoffmann (secretary) M. Sc. Błażej Przybylik (representative of PhD students) M. Sc. Karolina Czerny (foreign language instructor)	According to the Senate Resolution no. 35/2025 (section 3, subsection 2) the member of the recruitment committee for Doctoral School could be: • Professor, Associate Professor or Doctor of Science – possibility to vote is permitted, • Secretary (possibility to vote is not allowed). Besides, during the recruitment procedure the above-mentioned members are present: • representative of PhD students, • foreign language instructor as adviser.

Doctoral School recruitment rules validated during the term covered by the evaluation

1. Legal acts regarding the recruitment procedure from 2019 to 2025

Academic year	Document content	Link to the document
2019/2020	Senate Resolution No. 133/2019 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2019/2020	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchwala_133_2019_Senatu_rekrutacja_do_Szkoly_Doktorskiej_.pdf
	Annex No. 1 to the Senate Resolution No. 133/2019 – application for admission to the Doctoral School	https://bip.awf.poznan.pl/wp-content/uploads/2025/07/Zalacznik-nr-1-do-uchwaly-133_2019-Rekrutacja-SzDo-2019.pdf
	Annex No. 2 to the Senate Resolution No. 180/2020 – definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2025/07/Zalacznik-nr-2-do-uchwaly-133_2019-Rekrutacja-SzDo-2019.pdf
2020/2021	Senate Resolution No. 180/2020 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2020/2021	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/Uchwaa_180_2020_Senatu_w_spr._trybu_i_zasad_rekrutacji_do_Szkoy_Doktorskiej.pdf
	Annex No. 1 to the Senate Resolution No. 180/2020 – application for admission to the Doctoral School	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchw_180-2020_za._nr_1_-_wniosek_o_przyjecie_do_SzD.pdf
	Annex No. 2 to the Senate Resolution No. 180/2020 – consent to perform the function of supervisor or assistant supervisor	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchw_180-2020_za._nr_2_-_zgoda_na_penienie_funkcji_promotora.pdf
	Annex No. 3 to the Senate Resolution No. 180/2020 – information obligation (GDPR)	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchw_180-2020_za._nr_3_-_obowizek_informacyjny.pdf
	Annex No. 4 to the Senate Resolution No. 180/2020 – definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchw_180-2020_za._nr_4_-_definicja_dyscypliny_nauk_o_kulturze_fizycznej.pdf

2021/2022	Senate Resolution No. 29/2021 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2021/2022	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchwaa_29-2021.pdf
	Annex No. 1 to the Senate Resolution No. 29/2021 – application for admission to the Doctoral School	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/zalacznik_nr_1_do_Uchwaly_nr_29_2021.pdf
	Annex No. 2 to the Senate Resolution No. 29/2021 – consent to perform the function of supervisor or assistant supervisor	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/zalacznik_nr_2_do_Uchwaly_nr_29_2021.pdf
	Annex No. 3 to the Senate Resolution No. 29/2021 – information obligation (GDPR)	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/zalacznik_nr_3_do_Uchwaly_nr_29_2021.pdf
	Annex No. 4 to the Senate Resolution No. 29/2021 – definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/zalacznik_nr_4_do_Uchwaly_nr_29_2021.pdf
2022/2023	Senate Resolution No. 105/2022 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2022/2023	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/Uchwala_105_2022_-_Rekrutacja_do_Szkoly_Doktorskiej_2022-2023.pdf
	Annexes No. 1-8 to the Senate Resolution No. 105/2022 – application for admission to the Doctoral School, candidate's personal questionnaire, list of documents attached to application for admission to the Doctoral School, consent to perform the function of supervisor, preliminary research concept, information obligation (GDPR), declaration (for foreigners), definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/Zalaczniki_nr_1-8_do_Uchwaly_105-2022-rekrutac_2022-23.pdf

2023/2024	Senate Resolution No. 154/2023 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2023/2024	https://bip.awf.poznan.pl/wp-content/uploads/2023/01/Uchwala-154_2023-Rekrutacja-do-SzD-2023_2024.pdf
	Annexes No. 1-8 to the Senate Resolution No. 154/2023 – application for admission to the Doctoral School, candidate's personal questionnaire, list of documents attached to application for admission to the Doctoral School, consent to perform the function of supervisor, preliminary research concept, information obligation (GDPR), declaration (for foreigners), definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2023/01/uchw_154-2023_Zalaczniki-nr-1-8-do-Uchwaly-rekrut.-SD-2023.pdf
2024/2025	Senate Resolution No. 210/2024 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2024/2025	https://bip.awf.poznan.pl/wp-content/uploads/2024/02/uchwala_210_2024_senatu_-_rektrutacja_do_szkoly_doktorskiej_2024_2025.pdf
	Annexes no. 1-8 to the Senate Resolution No. 210/2024 – application for admission to the Doctoral School, candidate's personal questionnaire, list of documents attached to application for admission to the Doctoral School, consent to perform the function of supervisor, preliminary research concept, information obligation (GDPR), declaration (for foreigners), definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2025/07/zalaczniki_nr_1-8_do_uchwaly_210_2024_senatu__rekrutacja_sd_2024_2025.pdf

2025/2026	Senate Resolution No. 35/2025 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2024/2025	https://bip.awf.poznan.pl/wp-content/uploads/2025/03/Uchwala-nr-35_2025-Senatu-rekrutacja-do-Szkoly-Doktorskiej-2025-2026.pdf
	Annexes no. 1-8 to the Senate Resolution No. 35/2025 – application for admission to the Doctoral School, candidate's personal questionnaire, list of documents attached to application for admission to the Doctoral School, consent to perform the function of supervisor, preliminary research concept, information obligation (GDPR), declaration (for foreigners), definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2025/03/zalaczniki_nr_1-8_do_uchwaly_35_2025_senatu__rekrutacja_sd_2025_2026.pdf
	Senate Resolution No. 81/2025 changing the Senate Resolution No. 35/2025 from February 18, 2025 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2025/2026	https://bip.awf.poznan.pl/wp-content/uploads/2025/03/uchwala_81_2025_senatu_-_zmiana_uchwaly_35_2025_rekrutacja_do_szkoly_doktorskiej_2025-2026.pdf

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Doctoral School Regulations validated during the term covered by the evaluation

Academic year	Document content	Link to the document
2019/2020	Senate Resolution No. 128/2019 concerning the Doctoral School Regulations	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchwala_128_2019_Senatu__Regulamin_Szkoly_Doktorskiej.pdf
	Annex to the Resolution No. 128/2019 regarding Doctoral School Regulations	https://awf.poznan.pl/wp-content/uploads/2025/07/Regulation-since-2019-20.pdf
2022/2023	Senate Resolution No. 104/2022 amending Senate Resolution No. 128/2019 concerning Doctoral School Regulations	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/Uchwala_104_2022_-_zmiany_w_Regulaminie_Szkoly_Doktorskiej.pdf
	Annex to the Resolution No. 104/2022 regarding Doctoral School Regulations	https://awf.poznan.pl/wp-content/uploads/2023/02/Regulamin_Szkoy_Doktorskiej_od_2022-23-ENG.pdf
2024/2025	Senate Resolution No. 240/2024 amending Senate Resolution No. 104/2022 concerning Doctoral School Regulations	https://bip.awf.poznan.pl/wp-content/uploads/2024/07/uchwala_240_2024_-_zm_uchwale_nr_128_2019_regulamin_szd.pdf
	Annex to the Resolution No. 240/2024 regarding Doctoral School Regulations	https://awf.poznan.pl/wp-content/uploads/2025/07/Regulation-since-2024-25.pdf

Doctoral School recruitment rules validated during the term covered by the evaluation

1. Legal acts regarding the recruitment procedure from 2019 to 2025

Academic year	Document content	Link to the document
2019/2020	Senate Resolution No. 133/2019 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2019/2020	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchwala_133_2019_Senatu_rekrutacja_do_Szkoly_Doktorskiej_.pdf
	Annex No. 1 to the Senate Resolution No. 133/2019 – application for admission to the Doctoral School	https://bip.awf.poznan.pl/wp-content/uploads/2025/07/Zalacznik-nr-1-do-uchwaly-133_2019-Rekrutacja-SzDo-2019.pdf
	Annex No. 2 to the Senate Resolution No. 180/2020 – definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2025/07/Zalacznik-nr-2-do-uchwaly-133_2019-Rekrutacja-SzDo-2019.pdf
2020/2021	Senate Resolution No. 180/2020 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2020/2021	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/Uchwaa_180_2020_Senatu_w_spr._trybu_i_zasad_rekrutacji_do_Szkoy_Doktorskiej.pdf
	Annex No. 1 to the Senate Resolution No. 180/2020 – application for admission to the Doctoral School	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchw_180-2020_za._nr_1_-_wniosek_o_przyjecie_do_SzD.pdf
	Annex No. 2 to the Senate Resolution No. 180/2020 – consent to perform the function of supervisor or assistant supervisor	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchw_180-2020_za._nr_2_-_zgoda_na_penienie_funkcji_promotora.pdf
	Annex No. 3 to the Senate Resolution No. 180/2020 – information obligation (GDPR)	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchw_180-2020_za._nr_3_-_obowizek_informacyjny.pdf
	Annex No. 4 to the Senate Resolution No. 180/2020 – definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchw_180-2020_za._nr_4_-_definicja_dyscypliny_nauk_o_kulturze_fizycznej.pdf

2021/2022	Senate Resolution No. 29/2021 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2021/2022	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/uchwaa_29-2021.pdf
	Annex No. 1 to the Senate Resolution No. 29/2021 – application for admission to the Doctoral School	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/zalacznik_nr_1_do_Uchwaly_nr_29_2021.pdf
	Annex No. 2 to the Senate Resolution No. 29/2021 – consent to perform the function of supervisor or assistant supervisor	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/zalacznik_nr_2_do_Uchwaly_nr_29_2021.pdf
	Annex No. 3 to the Senate Resolution No. 29/2021 – information obligation (GDPR)	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/zalacznik_nr_3_do_Uchwaly_nr_29_2021.pdf
	Annex No. 4 to the Senate Resolution No. 29/2021 – definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/zalacznik_nr_4_do_Uchwaly_nr_29_2021.pdf
2022/2023	Senate Resolution No. 105/2022 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2022/2023	https://bip.awf.poznan.pl/wp-content/uploads/2022/12/Uchwala_105_2022_-_Rekrutacja_do_Szkoly_Doktorskiej_2022-2023.pdf
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2023/2024	Senate Resolution No. 154/2023 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2023/2024	https://bip.awf.poznan.pl/wp-content/uploads/2023/01/Uchwala-154_2023-Rekrutacja-do-SzD-2023_2024.pdf
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2024/2025	Senate Resolution No. 210/2024 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2024/2025	https://bip.awf.poznan.pl/wp-content/uploads/2024/02/uchwala_210_2024_senatu_-_rektrutacja_do_szkoly_doktorskiej_2024_2025.pdf
	Annexes no. 1-8 to the Senate Resolution No. 210/2024 – application for admission to the Doctoral School, candidate's personal questionnaire, list of documents attached to application for admission to the Doctoral School, consent to perform the function of supervisor, preliminary research concept, information obligation (GDPR), declaration (for foreigners), definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2025/07/zalaczniki_nr_1-8_do_uchwaly_210_2024_senatu__rekrutacja_sd_2024_2025.pdf

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	Annexes no. 1-8 to the Senate Resolution No. 35/2025 – application for admission to the Doctoral School, candidate's personal questionnaire, list of documents attached to application for admission to the Doctoral School, consent to perform the function of supervisor, preliminary research concept, information obligation (GDPR), declaration (for foreigners), definition of the discipline of physical culture sciences	https://bip.awf.poznan.pl/wp-content/uploads/2025/03/zalaczniki_nr_1-8_do_uchwaly_35_2025_senatu__rekrutacja_sd_2025_2026.pdf
	Senate Resolution No. 81/2025 changing the Senate Resolution No. 35/2025 from February 18, 2025 concerning the procedure and principles of candidates recruitment to the Doctoral School in the discipline of physical culture sciences at the Poznań University of Physical Education in Poznań at the academic year 2025/2026	https://bip.awf.poznan.pl/wp-content/uploads/2025/03/uchwala_81_2025_senatu_-_zmiana_uchwaly_35_2025_rekrutacja_do_szkoly_doktorskiej_2025-2026.pdf

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2023-2027

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Minister of Science and Higher Education
Republic of Poland

Assessment of the quality of education in doctoral schools
is made by the Science Evaluation Committee

The Evaluation System of Doctoral Schools
is financed by the Minister of Science and Higher Education