



**The Hungarian University of Agriculture and Life
Sciences
Doctoral School of Natural Sciences
Training Plan**

**This Training Plan applies to doctoral students who commenced their studies
after 1 September 2026**

Gödöllő, 2026.

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PREAMBLE

The Doctoral School of Natural Sciences (hereinafter: TTDI) was granted the right to operate in 2025 following a decision by the Senate of the Hungarian University of Agriculture and Life Sciences (hereinafter: MATE or the University) on 16 May 2025, as part of the restructuring of MATE's doctoral schools. As part of the organisational restructuring, the MATE Doctoral School of Environmental Sciences (identification code D65), which continues to operate under a new name, was expanded to include the biological sciences and absorbed the former Doctoral School of Biological Sciences (BDI) (ID D63) and the Fesetics Doctoral School (ID D228). The Doctoral School of Biological Sciences and the Fesetics Doctoral School ceased to exist on 31 August 2025.

The mission of the TTDI

The mission of the TTDI is to train the qualified leading academics and researchers of the future in the fundamental and applied fields of environmental sciences and biological sciences.

The TTDI's role is to direct, organise and oversee doctoral training based on fundamental and applied research into soil, water and air, as well as the organisms inhabiting these spheres (ranging from the molecular to the supra-individual scale), and to manage the processes relating to degree conferment and habilitation procedures in these fields.

The quality of the TTDI's doctoral programmes is primarily reflected in the academic performance of its doctoral students. For this reason, the TTDI's publication requirements have been established in accordance with the criteria of leading international doctoral programmes in environmental science and biology. Similarly, to ensure the quality of TTDI's operations, the habilitation procedure aligns with the requirements set by the Hungarian Academy of Sciences (hereinafter: MTA) in the disciplinary fields covered by the TTDI.

At the TTDI, research topics are announced within the framework of two doctoral programmes. Training takes place within the doctoral programmes, in the context of thematic research groups that operate as research workshops.

The TTDI Training Plan is based on the following legal sources and regulations:

- Act CCIV of 2011 on National Higher Education (hereinafter: Nftv.)
- Government Decree No. 87/2015 (9 April) on the implementation of certain provisions of Act CCIV of 2011 on national higher education,
- Government Decree No. 387/2012 (19 December) on doctoral schools, the procedure for doctoral studies and habilitation,
- Government Decree No. 121/2013 (26 April) on the Education Office,
- the Rules of Procedure adopted by Resolution No. 2024/7/XX of the Board of the Hungarian Higher Education Accreditation Committee (hereinafter: MAB). (Amended by Decisions Nos. 2025/1/XV, 2025/4/VIII and 2025/5/XIV. Effective from 1 January 2025),
- Government Resolution No. 1229/2012 (6 July) amending Government Resolution No. 1004/2011 (14 January) on tasks relating to the introduction of the Hungarian Qualifications Framework and on the establishment and introduction of the National Qualifications Framework.

In respect of matters not covered in this document, MATE's regulations in force at any given time shall apply.

BASIC INFORMATION ON THE TTDI

Name of the doctoral school: Természettudományok Doktori Iskola

Abbreviated name of the doctoral school: TTDI

Name of the doctoral school in English: Doctoral School of Natural Sciences

Abbreviated name of the doctoral school in English: DSNS

Head of the doctoral school: Dr Erika Michéli Csákiné, professor, full member of the Hungarian Academy of Sciences

Academic Secretary of the Doctoral School: Dr Éva Várallyay, Research Fellow, Associate Member of the Hungarian Academy of Sciences

Field of study classification of the doctoral school: natural sciences

Disciplines of the doctoral school: environmental sciences, biological sciences

Names of the doctoral programmes offered by the doctoral school: Doctoral Programme in Environmental Sciences (KDP), Doctoral Programme in Biological Sciences (BDP)

Names of the doctoral programmes offered by the doctoral school in English: Environmental Science Programme (ESP), Biological Science Programme (BSP)

Name of the doctoral degree conferred: PhD in the field of natural sciences

Locations of the doctoral school: Budapest, Gödöllő, Keszthely

Postal address of the doctoral school: 2100 Gödöllő, Páter Károly utca 1.

Website address of the doctoral school: <https://doktori.uni-mate.hu>

Duration of the programme: 8 semesters

Mode of study: full-time, organised doctoral programme funded by Hungarian state scholarships or self-financing, as well as cooperative doctoral programmes

Language of instruction: Hungarian and English

Doctoral Programme in Environmental Sciences (KDP)

Disciplinary classification: environmental sciences

Research areas: Soil science, environmental chemistry, ecotoxicology and microbiology, agrobiodiversity, gene conservation, organic farming, landscape ecology, nature and landscape conservation, environmental safety, water management and climate protection.

Head: Dr András Székács, Professor, Doctor of the Hungarian Academy of Sciences

Secretaries: Dr Miklós Gulyás, Associate Professor; Dr Mátyás Cserhádi, Associate Professor

The **KDP** focuses on research topics within the environmental sciences: the analysis of the components, processes, pollution and safety of the natural, agricultural and built environments; environmental analysis and ecotoxicology; soil science; water management and climatology; landscape ecology; nature and landscape conservation; agrobiodiversity research; and organic farming.

The KDP's research groups:

- Environmental chemistry, ecotoxicology and environmental technology
- Environmental and Landscape Management
- Environmental biology and environmental safety
- Soil Science
- Water Management and Climatology

Environmental Chemistry and Ecotoxicology, Environmental Technology Research Group

Research Group Leader: Dr András Székács, Professor

The programme covers the assessment of the chemical and biochemical characteristics and environmental implications of chemicals and technologies used in agriculture; issues relating to agrochemistry and plant nutrient management; the occurrence, fate and biochemical/biological/ecotoxicological effects of these substances, and their monitoring in environmental matrices, including the development of the methods employed. The technologies encompass clean, resource-efficient processes in relation to environmental matrices, which reduce material and energy consumption, improve waste processing, reduce emissions, utilise by-products, minimise the harmful effects of waste disposal, and represent progress towards a circular economy approach. Within the framework of the programme, research is being conducted into composting, wastewater treatment, biogas production, the pyrolysis process, the agricultural use of their products and the assessment of their environmental impact, as well as the prevention of environmental damage.

Environmental and Landscape Management Research Group

Research Group Leader: Dr Károly Penksza, Professor

The programme accepts PhD students in the fields of landscape ecology, nature and landscape conservation, agrobiodiversity and organic farming. We welcome applicants interested in studying the abiotic and biotic components of the environment, exploring processes influenced by both natural and human activity, landscape-level planning, ecosystem services, the protection of biodiversity, and the effectiveness of nature conservation interventions. We provide opportunities to study the variability of cultivated and weed plants introduced by various cultures in prehistoric and historic times, as well as to conserve plant and animal genetic resources, to study ethology, and to research the development of modern organic farming systems that meet contemporary requirements while building on traditional farming practices.

Environmental Biology and Environmental Safety Research Group

Research Group Leader: Dr András Táncsics, Professor

The PhD programme in Environmental Science trains environmental researchers with a complex, ecosystem-centred or ecological mindset, who are able to integrate and utilise the various sub-disciplines of the natural sciences. One of the cornerstones of this objective is the Environmental Biology and Environmental Safety programme, which regards it as its primary task to enable students to solve theoretical and practical environmental problems using a biological approach grounded in the natural sciences, while maintaining the rigour of engineering. The programme places particular emphasis on the microbiological sub-fields of basic and applied environmental research; the detection of contamination affecting environmental components and the food chain; their assessment using biological approaches; their analysis through ecotoxicological and toxicological studies; and their biodegradation; it also seeks to identify correlations in environment-environment and environment-human interactions. It deals in depth with the molecular microbiological foundations of environmental protection and environmental safety.

Soil Science Research Group

Research Group Leader: Dr Erika Michéli Csákiné, Professor

The programme offers training and research opportunities in classical pedology and applied soil science. It covers soil formation, classification, spatial distribution, mapping and conservation; the chemical and physical processes occurring in soil; the water and material cycles between soil and its environment; the monitoring of these processes; soil fertility; plant nutrient supply; and the environmental functions of soils. Research programmes may focus on domestic soil conditions, regional or global issues, or, in the case of international students, on topics relevant to their own countries. Research relating to past eras and buried soils also forms part of the

programme. The recommended modules and research topics are based on observation, measurement and data processing methods, as well as instruments used in international practice, ensuring that doctoral students conduct high-quality research.

Water Management and Climatology Research Group

Research Group Leader: Dr Zoltán Vekerdy, Professor

The programme focuses on the components of the climate and the water cycle and their dynamics. The main focus is on their impacts on agriculture and the environment. The topics allow for research into both micro- (plant-level) and macro-processes (catchment-level and regional). The approach may be physical, chemical and/or biological, while also taking socio-economic implications into account. The aim is to elucidate these processes and understand the underlying relationships, utilising existing observation and measurement methods (e.g. laboratory measurements, in situ field measurements, remote sensing, data mining) as well as data processing methods (statistical analysis, development of conceptual models, stationary and dynamic computer modelling, artificial intelligence). We support the design of original measurements and experiments, both through domestic and international collaboration. International students may also work on solving climatological and water management problems specific to their own countries. This module therefore allows for a high degree of interdisciplinarity, thereby significantly fostering collaboration between doctoral programmes and doctoral schools.

Doctoral Programme in Biological Sciences (BDP)

disciplinary classification: biological sciences

Research area: Fundamental and applied biological sciences, ranging from the molecular level through biochemistry to the supra-individual, landscape and global ecological scales.

Head: Dr Zoltán Nagy, Professor, Doctor of the Hungarian Academy of Sciences

Secretary: Dr Renáta Petrikovszki, university research associate

The **BDP** offers opportunities to obtain degrees in research areas within the biological sciences — in the fields of basic and applied biological sciences, ranging from the molecular and biochemical levels, through microbial organisms, to supraindividual communities, as well as landscape and global ecological scales.

The BDP's Research Groups:

- Fundamentals of Agricultural Biotechnology
- Microbiology
- Plant Ecology, Ecophysiology
- Zoology, Animal Ecology

Fundamentals of Agricultural Biotechnology Research Group

Research Group Leader: Dr István Papp, Professor

The relationship between enzyme structure and function; regulation of proteolytic enzyme activity. The molecular genetics of nitrogen fixation. Applied developmental genetics. Gene regulation. Site-specific recombination. Genetic mapping and marker-assisted selection. Transgenic and gene-edited organisms in agriculture, and their environmental and health risks. Bioremediation. Bioenergy production from plant sources. Fundamentals of biotechnological processes based on tissue culture and fermentation. Molecular biology of the production and effects of bioactive compounds. Molecular mechanisms of stress responses. Post-harvest biotechnology.

Microbiology Research Group

Research Group Leader: Dr Katalin Posta, Professor

Investigation of the diversity of soil microorganisms and their role in element cycling and organic matter formation. Climate change and soil microorganisms. The role of mycorrhizal fungi in mitigating biotic and abiotic stress. Microorganisms involved in the recycling of lignocellulosic waste and their enzyme systems. Development of nucleic acid-based diagnostic methods for the detection of toxin-producing moulds. Environmental microbiology. Research into microbial interactions, changes in the gut microbiome and antibiotic resistance genes (ARGs).

Plant Ecology and Ecophysiology Research Group

Research Group Leader: Dr Zoltán Nagy, Professor

Production ecology of plant communities/ecosystems, material and energy fluxes. Stress physiology. Ecophysiology and proximal/remote sensing. Dormancy physiology. Global climate change and environmental issues; plant ecology in agriculture, environmental protection and nature conservation. The ecology and physiology of drought-tolerant plants and their communities. Successional botany: vegetation dynamics, community organisation, succession, degradation. Plant stress physiology. Topics in plant taxonomy, coenology, floristics, phytogeography and botanical conservation.

Zoology, Animal Ecology Research Group

Research Group Leader: Dr Péter István Nagy, Professor

Zootaxonomy, fundamentals of systematics, faunistics and zoogeography. Taxonomy of invertebrate groups, and issues in faunistics and zoogeography. Population ecology of animals, population dynamics. Population interactions. Synzoology, with particular emphasis on the organisation of communities and biogeochemical cycles. Zoological and animal ecological issues relating to global environmental problems, agriculture, environmental protection, nature conservation and ecotoxicology.

1. PRESENTATION OF THE DOCTORAL PROGRAMME

1.1. The conceptual framework of the doctoral programme

The doctoral (PhD) programme is the highest level of higher education, the aim of which is to enable students to become independent researchers. The role of the doctoral school is to train the next generation of academics, with a strong emphasis on research work and preparing students for successful publication. In addition, doctoral students acquire methodological skills and theoretical knowledge.

1.2. Entry criteria for the doctoral programme

Admission to scientific research programmes and training is open to those who are agricultural, animal husbandry, horticultural, food, landscape architecture, forestry or chemical engineers, veterinarians or biologists – or, in the case of those with other qualifications, subject to the individual decision of the admissions committee – who hold a degree obtained from a master's or integrated degree programme with at least a 'good' grade, or a certificate attesting to an equivalent university-level qualification or professional qualification (for those who graduated more than three years ago, this latter condition does not apply). Those who have prepared for

the degree independently may also join the research and dissertation phase, provided they have met the admission and doctoral programme requirements and passed the complex examination. By way of exception, exceptionally talented applicants who hold an undergraduate degree with an excellent classification and professional qualification – while concurrently undertaking a Master’s programme – as well as exceptionally talented applicants currently in the final two academic years of an integrated Master’s programme, may be admitted to the doctoral programme while continuing their studies on the integrated Master’s programme. provided that the applicant has passed the entrance examination and can demonstrate that they possess outstanding academic and scientific knowledge, as well as a language qualification.

Language requirements for the application:

a state-recognised language examination certificate at intermediate level, type ‘C’ or ‘B2’, or an equivalent qualification, or a degree obtained from a Master’s programme taught in English.

Successful admission requires familiarity with the relevant literature in the selected module, as well as proficiency in experimental and methodological issues.

1.3 Entry criteria for individually preparing students for the TTDI

Students on the individual preparation programme may enrol in the TTDI after successfully passing the complex examination, which serves as the entrance examination. To apply, candidates must demonstrate the completion of at least 90 credits in accordance with the ‘Rules for the calculation of credits for students on the individual preparation programme’ detailed in Appendix 2. With regard to further detailed rules, the provisions of Section 21 of the University Doctoral Regulations (hereinafter: EDSZ) shall apply.

1.4. Learning outcomes

In accordance with the objectives of the TTDI and Level 8 of the Hungarian Qualifications Framework (MKKR) – as set out in Government Decree No. 1229/2012 (VII. 6.) – the competences of professionals who have obtained a doctoral degree through the TTDI programme in the natural sciences are as follows:

Knowledge

- Is familiar with the general and specific characteristics of the natural sciences, their most important areas of study and precisely defined boundaries, as well as the connections between the discipline and related fields.
- Has a detailed understanding of the interrelationships, theories and terminology underpinning the discipline.
- Is familiar with the discipline’s specific research methods (for acquiring knowledge and solving problems), abstraction techniques, and methods for developing the practical implications of theoretical issues.

Skills

- Can conduct a basic analysis of the concepts forming the body of knowledge in the given field, formulate connections in a synthetic manner, and carry out appropriate evaluation.
- Possesses the skills necessary for independent learning.

- Can identify routine professional problems, explore and articulate the theoretical and practical background required to solve them, and resolve them (through the practical application of standard procedures).
- Can use and understand specialist literature, IT resources and library resources relevant to their field.
- Can cooperate with others.
- Can manage various resources.
- Can apply their professional knowledge in accordance with the various professional requirements of a given workplace.

Attitudes

- Is aware of, embraces and authentically represents the social standing and role of their profession, as well as its fundamental relationship with the world.
- Is open to authentically conveying and communicating the fundamental characteristics of their profession's holistic mindset and practical operation.
- Is characterised by a commitment to continuous self-improvement.

Autonomy and responsibility

- Independently considers and elaborates on comprehensive, foundational professional issues, drawing on relevant sources.
- Takes responsibility for the views that underpin the profession.
- Demonstrates cooperation and responsibility in their dealings with qualified professionals in the relevant field.
- Consciously adheres to the ethical standards of their profession.

2. THE OPERATIONAL STRUCTURE AND GENERAL CHARACTERISTICS OF THE TTDI

The general governing rules for doctoral programmes are laid down in the EDSZ.

2.1 Forms of organised doctoral programmes

Doctoral programmes at the University may be undertaken in the following forms:

- a) organised, full-time, day-time study on a scholarship basis;
- b) self-funded, full-time, day-time organised programmes;
- c) Cooperative Doctoral Programme (EDSZ Section 3(19) and Section 20).

Pursuant to Section 16 of the EDSZ and the relevant statutory provisions, the duration of organised doctoral programmes is 8 semesters, during which students must complete at least 180 credits.

2.2 Stages of organised doctoral programme

The organised doctoral programme consists of two stages: semesters 1–4 comprise the 'training and research' stage, while semesters 5–8 comprise the 'research and dissertation' stage.

Students applying for the programme draw up their training and research plan individually, in consultation with their supervisor. At the end of the fourth semester, to mark the completion of

the training and research phase and as a prerequisite for commencing the research and dissertation phase, students must sit a complex examination that assesses their academic and research progress.

By the time of the complex examination at the end of the fourth semester, students must have accumulated a minimum of 90 credits; by the end of the programme, a minimum of 180 credits. Students may apply for a degree upon completion of their studies, provided they hold a certificate of completion issued upon fulfilment of the above conditions and have met the publication requirements set by the TTDI.

2.3 Structure of the TTDI's training programme

During their studies, doctoral students have research, academic, teaching (optional), and publication obligations that must be fulfilled in agreement with their supervisor.

In accordance with the relevant legislation, the TTDI supports its doctoral students in undertaking part of their studies abroad, as well as in undertaking study visits on topics intrinsically linked to their research work.

Students may enrol on modules advertised for the given semester in the NEPTUN Integrated Study System (hereinafter: NEPTUN TR). Doctoral students enrolled on a full-time programme must fulfil the study requirements approved by the TTDI during the first two years of their programme.

The specific provisions relating to the cooperative doctoral programme are set out in Section 20 of the EDSZ.

2.4 Distribution and recognition of credits required for the conferment of the doctoral degree

The research requirement, namely the completion of the 'supervised research' module, is compulsory for all students in every semester. The credit value of the module is 8 credits per semester in the first two years, 15 credits per semester in the second half of the programme, totalling 92 credits over the duration of the programme.

To fulfil **these academic requirements**, the TTDI prescribes two compulsory modules, while doctoral programmes stipulate further compulsory modules.

Completing the compulsory modules of the TTDI is worth 10 credits, while completing the modules required by the doctoral programmes is worth 8 credits. Elective modules may be selected from any doctoral programme offered by the TTDI or other doctoral schools at MATE, and are worth 6 credits.

It is possible to enrol on courses from undergraduate and master's programmes, but no credits will be recognised for completing them.

Where the candidate's research topic justifies it, we also support the enrolment in relevant doctoral courses at other universities in Hungary or abroad, as well as participation in summer schools, subject to the supervisor's recommendation and confirmation from the host institution that the course has been successfully completed.

Academic credits may also be applied for on an individual basis, for example, when attending summer schools or workshops led by visiting professors.

Completion of courses or summer schools at other universities is uniformly recognised as 6 credits, equivalent to the credit value of elective modules. The credit value of individual cases (e.g. one-day workshops) is discussed and approved by the Programme Committee (hereinafter: PT).

Applications for the recognition of external courses or events for credit purposes may be submitted to the programme secretaries and are subject to approval by the PT.

The course list (Appendix 3) is published on the TTDI's own website. The courses advertised for the given academic year are available to students via NEPTUN TR.

Fulfilment of academic requirements, including the acquisition of a minimum of 40 academic credits, is a prerequisite for admission to the complex examination; therefore, these must be completed within the first four semesters of the programme.

There is no compulsory **teaching obligation**, but if a doctoral student participates in teaching, they may earn up to 50 credits during the programme.

Teaching credits may be recognised for delivering courses and individual lessons, supervising dissertations and TDK projects, assessing dissertations and TDK projects, and contributing to the development of teaching materials. The credit values for each activity are set out in Appendix 5. In cases not explicitly regulated, the Programme Committee shall decide on the amount and recognition of teaching credits based on a detailed description submitted to the programme secretary, together with supporting documentation.

The recognition of teaching credits may be requested from the programme secretaries, provided the relevant supporting documentation is submitted (including a statement certified by the course coordinator).

Publication requirements are stipulated by the doctoral programmes; fulfilment of these requirements and the acquisition of at least 50 publication credits are prerequisites for initiating the degree conferment procedure. In addition to academic articles, publication credits may be recognised for presenting research results at national and international conferences, in the form of oral presentations and posters, in accordance with the table below.

Credit values for scientific publications

Scientific journal article:	first authorship	co-authorship
in an SCI D1 journal	40 credits	30 credits
in an SCI Q1 journal	30 credits	23 credits
In an SCI Q2 journal	20 credits	15 credits
In an SCI Q3 or Q4 journal	10 credits	8 credits
Participation in an international conference:		
presentation	7 credits	3 credits
poster	3 credits	2 credits
Participation in a domestic conference:		
presentation	5 credits	2 credits
poster	2 credits	1 credit

In addition to the above classifications, a maximum of 10 publication credits may be recognised for other publications (book chapters, specialist articles in Hungarian published in journals

listed in the Hungarian Academy of Sciences' (MTA) Departmental List or elsewhere), subject to an annual assessment by the PT.

It is the responsibility of the PhD student and the supervisor to ensure that **the TTDI is listed as the PhD student's own affiliation** in publications (articles, conference abstracts), as stipulated in the University's Publications and Publishing Regulations.

The PhD student is obliged to ensure that their publications are kept up to date in the Hungarian Scientific Works Repository (hereinafter: MTMT) at <https://www.mtmt.hu/>.

Registration with the MTMT is a prerequisite for the complex examination; publication credits may only be counted for publications recorded in the MTMT and linked to the TTDI.

The programme secretary verifies compliance with the minimum publication requirements based on the list of publications retrieved from the submitted MTMT. If the minimum requirements are not met, the programme secretary will reject the application for the conferment of the degree. Only data appearing in the MTMT may be taken into account when assessing publication activity.

2.5 Sample curriculum

The compulsory, compulsory-choice and optional modules of the TTDI can be grouped into module-specific and methodological areas, respectively. A separate model curriculum for each doctoral programme sets out the module titles, credit values, and course coordinators. The model curricula are set out in Appendix 1, while the list of courses approved for the programme is contained in Appendix 3. The model curricula are drawn up and reviewed by the Programme Committee (PT) at least every two years, taking into account the specialisations of the doctoral programmes. Where necessary, amendments may be made to the model curriculum following approval by the TTT.

2.6 Student forum and annual progress review

The TTDI monitors research progress annually to ensure it is proceeding at an appropriate pace. The annual reviews are always timed to coincide with the start of the cross-semester term; thus, for students commencing in September, the first review takes place 1.5 years after the start of their studies.

Progress is presented at programme-level and TTDI-level student forums. All students and supervisors may attend the forums; attendance is compulsory for students enrolled in the relevant programme at the programme-level forum and for all TTDI students at the TTDI-level forum, while attendance is expected of supervisors.

Doctoral students report on the results achieved during their first year and present their research after one year (or 1.5 years for those starting in September) at a programme-level forum organised within the framework of the programmes.

The programme secretary is responsible for organising the programme-level forum.

At the end of the second year, assessment takes the form of a complex examination.

At the end of the third year (3.5 years for those starting in September), the student presents the results achieved to date at the TTDI student forum. The organisation of the TTDI student forum is the responsibility of the TTDI's academic secretary.

2.7 Requirements for the complex examination

The conditions for the complex examination are set out in Section 12/A of Government Decree No. 387/2012 (19 December) and are governed by Section 24 of the EDSZ.

At the TTDI, the requirement for applying for the complex examination is

- the acquisition of 90 credits, of which at least 40 must be academic credits,
- and the completion of the compulsory modules of the TTDI and the doctoral programmes.

The theoretical topics covered in the complex examination are set out in Appendix 4.

Complex examination period: the second half of June – the first half of July, or January (during the intersession). Doctoral students will be notified of the date of the complex examination by the programme secretary.

Doctoral students must submit their doctoral dissertations within three academic years of the complex examination, in accordance with Section 26 of the EDSZ.

In the case of students preparing independently, the provisions of Section 21 of the EDSZ shall apply.

2.8 Certificate of Completion

The Centre for Doctoral and Habilitation Studies issues a certificate of completion (absolutorium) to doctoral students who have obtained the required credits in their doctoral programme. To obtain the absolutorium, a total of 180 credits must be completed within the framework set out in the table below:

Types of activities	Number of credits to be completed	
	Semesters 1–4	Semesters 5–8
Academic activities	minimum: 40 maximum: 90	-
Research activities		
- Research work	32	60
- Publications	minimum: 50	
Teaching	maximum: 50	
Total number of credits to be earned:	minimum: 90	
	minimum: 180	

The programme secretary checks that the credits have been completed, and the Programme Committee approves them. Any excess credits may be carried over from semesters 1–4 to semesters 5–8, but no more than the specified maximum may be counted towards the total in the first four semesters. Following the successful completion of the complex examination, at the request of the doctoral student and their supervisor, additional supervised research and publication credits may also be recognised in accordance with the TTDI's Rules of Procedure, thereby reducing the duration of the research and dissertation phase. The application for the awarding of the certificate of completion is initiated by the student.

2.9 Conditions for the conferment of a doctoral degree

The process and conditions for obtaining a doctoral degree are governed by **Chapter VII of the EDSZ and the TTDI's Rules of Procedure**.

The minimum requirement for obtaining a PhD at the TTDI is:

1. Obtaining an absolutorium, having earned the minimum 50 publication credits required for this.
2. A state language examination in English at a minimum B2 level (formerly Type C, intermediate level) or an equivalent qualification.

The document(s) certifying language proficiency must be presented at the time of application for admission, or when applying for the doctoral disputation (second foreign language), in the event that the intermediate-level language examination taken at the time of admission was not in English. Any intermediate-level English language examination issued by an accredited examination centre is acceptable as proof of language proficiency.

In the case of international students, if the applicant is not a native English speaker, they must hold a B2-level language examination in English that meets the requirements of the Common European Framework of Reference for Languages upon graduation.

3. **Acceptance/publication of one first-authored academic article classified as Q1–Q2;** in addition, doctoral programmes require the following publications to be fulfilled in order to obtain the degree:

The minimum publication requirement for the KDP:

The TTDI requires one publication as first author (or co-first author) or last author in a Q1–Q2-ranked academic journal, on a topic related to the dissertation. The KDP only recognises last authorship as leading authorship if the first author is a student supervised by the doctoral candidate.

The minimum publication requirement for the BDP is:

In addition to the article published in a Q1–Q2-rated international journal required by the TTDI, a further article rated Q is required. The applicant must be the first author in at least one of the two articles. If both articles are rated at least Q1–Q2, no further articles are required to obtain the degree.

If the second research article is classified only as Q3–Q4, the acceptance/publication of a further journal article in a peer-reviewed journal (though in this case, an impact factor and first authorship are not required).

In the case of first authorship in a D1 journal article, the Examination Board shall decide whether a further publication is required for the conferment of the degree.

4. Submission of the doctoral dissertation

In accordance with Section 26 of the EDSZ, the doctoral dissertation may be submitted once the student, in a structured programme, has obtained the absolutorium, fulfilled the language

and publication requirements set by the TTDI, and successfully completed the preliminary disputation. Changes to the research topic or the dissertation title may be made during the degree programme, either at the time of the complex examination or during the preliminary disputation, without the need for a separate procedure, simply by recording the changes in the minutes.

The formal requirements for the dissertation and theses are set out in Appendix 6 of the EDSZ.

In accordance with Section 3(3)(b) of the EDSZ, the TTDI allows for the submission of a dissertation-style dissertation.

A dissertation-style doctoral dissertation is a brief, dissertation-style summary of several academic publications, with the original works (publications) included as appendices.

An application to submit a dissertation-style dissertation at TTDI may be made, provided the following conditions are met:

- three or more scientific papers accepted for or published in Q1–Q2 journals, in which the doctoral candidate is the first or last author,
- in addition to the three core papers, the papers attached to the dissertation may be in other languages, provided they have been published in peer-reviewed scientific journals recognised by the academic community.

Final provisions

Final provisions:

(1) This Curriculum was adopted by the Senate of the Hungarian University of Agriculture and Life Sciences by Resolution No. 140/2026 (VIII.27.). It shall enter into force on the 8th day following its adoption.

(2) If a doctoral candidate commenced their doctoral programme prior to the 2026/2027 academic year, they may complete it in accordance with the requirements in force at the time of commencement, provided that the provisions of this Programme Plan apply to procedural matters.

Gödöllő, 2026. August 27

Dr Csaba Gyuricza
Rector, Chair of the Senate

APPENDIX

Appendix No. 1

TTDI Model Curriculum

Recommended plan for acquiring credits during the programme until the completion of the intermediate examination:

Semester	Research	Study	Teaching	Publications	Total	
1.	8	min 40, max 90	max 50	min 50	min 90	>complex exam
2.	8					
3.	8					
4.	8					
5.	15	-	max 50	min 50	min 180	>certificate of completion >conferment of the degree
6.	15					
7.	15					
8.	15					
credits	92	min 40, max 90	max 50	min 50	min 180	
fulfilment of publication requirements						

In THE TTDI, there is no set order for taking modules; they can be completed freely, subject to the modules being offered. **Compulsory modules of THE TTDI – these are not offered every term, and their inclusion in the programme is not tied to a specific term.**

Methodology of Scientific Communication

Course coordinator: Dr Miklós Sárospataki (credit value: 10)

A statistics module (selected from the advertised statistics modules, depending on the student's knowledge and research profile)

Course coordinator: Dr Márta Ladányi (credit value: 10)

Supervised research

Course coordinator: the supervisor (credit value: 8 in semesters 1–4, 15 in semesters 5–8)

Compulsory module of the KDP:

Environmental Science

Course coordinator: Dr András Székács (credit value: 8)

Compulsory module FOR THE BDP:

Introduction to Data Analysis in R

Course coordinator: Dr Szilvia Fóti (credit value: 8)

An up-to-date list of optional modules for doctoral programmes (including module coordinators and credit values) is available on the TTDI website and in NEPTUN TR at the start of each semester.

Appendix 2

Rules for calculating credits for self-directed study

1. Credit values for academic publications

Scientific journal article:	first authorship	co-authorship
in an SCI D1 journal	40 credits	30 credits
in an SCI Q1 journal	30 credits	23 credits
In an SCI Q2 journal	20 credits	15 credits
In an SCI Q3 or Q4 journal	10 credits	8 credits
foreign-language non-IF (peer-reviewed) journal article	7 credits	4 credits
Hungarian-language non-IF (peer-reviewed) journal article	5 credits	3 credits
Participation in an international conference:		
presentation	7 credits	3 credits
poster	3 credits	2 credits
Participation in a domestic conference:		
presentation	5 credits	2 credits
poster	2 credits	1 credit
Book		
Foreign-language book, coursebook, book chapter	10 credits	8 credits
Book, coursebook or book chapter in Hungarian	6 credits	4 credits
Book editing in Hungary	5 credits	4 credits
References		
in a domestic publication	1 credit	
in a foreign publication	2 credits	

2. Topic-specific works, awards		Credit value per item
Patents	Domestic patent	5
	Foreign patent	7
	International patents	9
Preparation of professionally accredited plans, studies and surveys at international level	As a supervisor	7
	As a participant	5
	As a supervisor	6

Preparation of nationally accredited professional plans, studies and surveys	As a participant	4
Preparation of non-accredited professional plans, studies and surveys	As a supervisor	2
	As a participant	1
Professional awards	Foreign academic or professional award	10
	Award granted by the Hungarian Academy of Sciences (MTA) or a government body	10
	Award granted by a domestic scientific society or chamber	6
	Award from a domestic foundation or professional association	5

3. Research and expert activities		Credit value / item
Successful foreign or international scientific and R&D grant applications, research commissions	Principal investigator	10
	Participant	5
Successful domestic scientific and R&D grants, research commissions	Principal investigator	6
	Participant	3
International expert commissions		3

4. Training of the next generation of scientists		Credit value per item
Supervision of student research projects, dissertation supervision, consultancy work	Theses submitted and awarded prizes	4
	Theses submitted	2

5. Other academic activities		Credit value / item
International professional committee, association	Officer	8
	Member	2
Editorial board of a domestic journal	Officer	7
	Member	2
	Officer	8

Training Plan

Editorial board of a foreign journal	Member	2
Organising committee of an international congress or conference	Officer	6
	Member	2
Organising committee of a domestic congress or conference	Officer	5
	Member	2

Appendix 3

The TTDI's current agenda

BDP syllabus:

Course coordinator	email address	course title	credits
Judit Bódis	bodis.judit@uni-mate.hu	Field Methodology in Plant Population Biology	6
		Knowledge of native willow species	6
		Knowledge of native grass species	6
Anna Mária Csörgő	Csergo.Anna.Maria@uni-mate.hu	Plant population biology	6
Edit Farkas	farkas.edit@okologia.mta.hu	Lichenology I	6
		Lichenology II.	6
		Lichen Chemistry I	6
		Lichen Chemistry II	6
Szilvia Fóti	Foti.Szilvia@uni-mate.hu	Data Processing in R: An Introduction to the Analysis of Scientific Data	8
Péter Kaló	kalo.peter@uni-mate.hu	Plant–microbe symbiotic relationships; genetic analysis of mycorrhizal associations and symbiotic nitrogen fixation	6
Előd Kondorosy	kondorosy.elod@uni-mate.hu	Zoology and morphology	6
		Conservation of invertebrates	6
Marianna Marschall	marschall.marianna@uni-eszterhazy.hu	Chapters in Plant Biology	6
János Nagy	nagyjano@yahoo.com	Botanical Issues in Nature Conservation	6
		Cenology	6
		Plant Geography	6
		Aquatic plants – wetland habitats	6
Zoltán Nagy	Nagy.Zoltan@uni-mate.hu	Plant Physiology	6
Ferenc Olasz	Olasz.Ferenc@uni-mate.hu	Mobile genetic elements	6

István Papp	Papp.Istvan@uni-mate.hu	Current issues in horticultural plant physiology and molecular biology	6
Katalin Posta	Posta.Katalin@uni-mate.hu	Mycorrhizal fungi	6
Dénes Saláta, Ákos Pető	Salata.Denes@uni-mate.hu	Wood anatomy and the basics of tree-ring analysis	6
Péter Sály	saly.peter@ecolres.hu	Fish biology and nature conservation	6
		Simulation-based ecological modelling	6
Miklós Sárospataki	sarospataki.miklos@uni-mate.hu	Biology and Conservation of Bees	6
		Methodology of scientific communication	10
Andrea Sass-Gyarmati	sass.gyarmati.andrea@uni-eszterhazy.hu	Tropical Botany	6
Éva Várallyay	varallyay.eva@uni-mate.hu	Plant regulatory small RNAs	6
		Viral genetics and viral diagnostics	6

Appendix 4

Topics for the TTDI complex examination

4.1 Topics for the TTDI KDP complex examination

4.1 Topics for the TTDI BDP complex examination

Appendix 5

List of activities eligible for educational credits within the TTDI