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**The Hungarian University of Agriculture and Life Sciences
Doctoral School of Agricultural and Food Sciences
(AÉTDI)
Training Plan**

**This Training Plan
applies to doctoral students who commenced their doctoral studies after 01 September 2026**

**Budapest – Gödöllő – Kaposvár – Keszthely
2026**

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PREAMBLE

The Doctoral School of Agricultural and Food Sciences (hereinafter: AÉTDI or Doctoral School) comprises the Doctoral Schools of Animal Biotechnology and Animal Sciences, Animal Breeding Science, Food Science, Horticultural Science and Plant Science Doctoral Schools, as well as the relevant sub-programmes of the Festetics Doctoral School. Its research activities are based on the academic profiles, achievements and professional networks previously established within the framework of these doctoral schools. The following doctoral programmes operate within the current framework:

- Doctoral Programme in Animal Sciences (ÁTDP)
- József Farkas Doctoral Programme in Food Science (ÉTDP)
- Doctoral Programme in Plant and Horticultural Sciences (NKTDP).

The AÉTDI 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 [hereinafter: Government Decree No. 387/2012 (19 December)],
- 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 Decision No. 1229/2012 (VII. 6) amending Government Decision No. 1004/2011 (14 January) on the establishment and implementation of the National Qualifications Framework [hereinafter: Government Resolution No. 1229/2012 (6 July)].

In respect of matters not covered in this document, the current regulations of MATE shall apply.

BASIC INFORMATION ABOUT AÉTDI

Name of the doctoral school, abbreviated name:	Agrár- és Élelmiszertudományok Doktori Iskola (AÉTDI)
Name of the doctoral school, abbreviated name in English:	Doctoral School of Agricultural and Food Sciences (DSAFS)
Classification of the doctoral school by field of study:	agricultural sciences
Disciplines of the doctoral school:	animal sciences food sciences crop production and horticultural sciences
Names of the doctoral school's programmes:	Doctoral Programme in Animal Sciences (ÁTDP) József Farkas Doctoral Programme in Food Science (ÉTDP) Doctoral Programme in Plant and Horticultural Sciences (NKTDP)
Names of doctoral school programmes in English:	Animal Science Programme Food Science Programme Plant and Horticulture Programme
Name of the doctoral degree conferred:	PhD in Agricultural Sciences
Location of the doctoral school:	Budapest Gödöllő Kaposvár Keszthely
Postal address of the doctoral school:	2100 Gödöllő, Páter Károly utca 1.
Doctoral School website address:	https://doktori.uni-mate.hu/agrar-es-elelmiszertudomanyok-doktori-iskola/bemutakozas
Doctoral School ODT ID:	MAB ID: 232
Year the doctoral programme began:	2025
Head of the doctoral school:	Prof. Dr. Melinda Kovács, university professor, full member of the Hungarian Academy of Sciences
Name, position, email address and telephone number of contact person(s):	Prof. Dr. Melinda Kovács, Head of the Doctoral School 7400 Kaposvár, Guba S. u. 40, Laboratory Building, Ground Floor, Room 006. kovacs.melinda@uni-mate.hu +36 82 505 800 / 2201 Prof. Dr. Júlia Halász, university professor, Doctor of the Hungarian Academy of Sciences (MTA), Scientific Secretary of the DI 1118 Budapest, Villányi út 29–43, Building A, Room 25 halasz.julia@uni-mate.hu +36 1 3057267

Duration of the programme:	8 semesters
Programme format:	Full-time, organised doctoral programme funded by Hungarian state scholarships and self-financing, as well as a cooperative doctoral programme
Language of instruction:	Hungarian and English

1. OVERVIEW OF THE DOCTORAL PROGRAMME

1.1. The conceptual framework of the doctoral programme

The doctoral (PhD) programme is the highest level of higher education, whose aim 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 a research topic and the programme is open to those who hold a degree in agricultural sciences, animal husbandry, horticulture, food, landscape architecture, forestry or chemical engineering, veterinary sciences or biology – or, in the case of those with other qualifications, subject to the individual decision of the admissions committee – 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 in the integrated Master's programme, provided that the applicant has passed the entrance examination and can demonstrate 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 modules, as well as proficiency in experimental and methodological issues.

1.3. Learning outcomes

In accordance with the objectives of the AÉTDI 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 AÉTDI programme in the field of agricultural sciences, specifically in the disciplines of animal husbandry, food sciences, crop production and horticulture, are as follows:

Knowledge

- Knows the general and specific characteristics, the most important areas of research and the precisely defined boundaries of the broad modules of animal husbandry, food science, crop production and horticulture within agricultural sciences, as well as the links between this field and related disciplines.

- 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 analyse the concepts forming the body of knowledge in the given field, to formulate connections synthetically, and to carry out appropriate evaluation.
- Possesses the skills required for independent research.
- 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 the 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 discipline.
- 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 AÉTDI

The general governing rules relating to doctoral training are set out in the University Doctoral Regulations (hereinafter: EDSZ).

2.1. Forms of organised doctoral programmes

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

- a) organised programmes with a Hungarian state scholarship, on a full-time, daytime basis;
- b) self-funded, full-time, daytime 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. Phases of organised doctoral programmes

The organised doctoral programme consists of two phases: semesters 1–4 comprise the ‘training and research’ stage, while semesters 5–8 comprise the ‘research and dissertation’ stage. At the end of the fourth semester, as the conclusion of the training and research phase and a prerequisite for commencing the research and dissertation phase, a complex examination must be passed to assess academic and research progress.

During the four-year programme, doctoral students must earn a minimum of 12 credits per semester and at least 180 credits in total (eight semesters). Failure to do so will result in the doctoral student being unable to continue their studies.

The requirement for enrolment in the complex examination is the completion of 70 credits; by the time of the complex examination, a minimum of 90 credits must have been attained, of which 100 per cent of the training (academic) credits undertaken in the study plan must have been obtained. An additional requirement for the József Farkas Doctoral Programme in Food Science is at least one published or accepted English-language article with an Impact Factor (IF) or classified as Q1–Q3 on the topic of the PhD dissertation.

The requirement for obtaining the certificate of completion is the accumulation of at least 180 credits.

2.3. Individual doctoral degree programmes

The Programme Committee (hereinafter: PT) assesses the academic, publication and professional achievements submitted by the individually preparing applicant and recognises credits based on the values in Table 1. If the total credits reach the minimum required for the complex examination (90 credits), the individually preparing candidate must sit the complex examination.

Upon successful completion of the complex examination, enrolment for the research and dissertation phase must be completed during the enrolment period following the examination.

Table 1

Eligible credits	Credits
I. Previous academic credits	
Previously completed PhD course	6 / course
Participation in profession-related training	4 / course
Second degree in a related field	6
Proof of other professionally recognised training	4 / course
The maximum total credits that can be recognised	30

II. Publications and their impact	
In accordance with the calculation of publication credits (see Chapter 2.7)	

III. Other professional achievements	Credits
State-recognised variety or patent (domestic/international)	6 / 10
Other technological development (domestic/international)	6 / 10

Participation in a research project, domestic/international, depending on the nature of the participation	Between 6–10 / 10–15
Recognition by a domestic or international professional organisation or scientific society	3 / 5

IV. Regular teaching activities at the university level	Credits
Course/module title, university, degree programme, level of study, duration (to be taken into account)	max. 10
First prize or grand prize at the OTDK	3
OTDK 2nd or 3rd prize, MÉTE TDK 1st, 2nd or 3rd prize, or university TDK 1st prize	2
Supervision (dissertation, thesis, TDK)	2 / paper

Credits may only be recognised for work that is authentically substantiated by appropriate documentation.

For further details on the rules, the provisions of Section 21 of the EDSZ shall apply.

2.4. Structure of the AÉTDI training programme

The AÉTDI **comprises two compulsory modules**, which all students must complete following a broadly identical syllabus; these are each worth 10 credits:

- Design and statistical evaluation of experiments,
- Preparation of scientific papers and dissertations.

In addition to the two compulsory modules, students must choose from compulsory elective modules (totalling 8 credits) and optional modules (totalling 6 credits). Given that the research topics of students in different disciplines – and within those disciplines, in different specialisms – vary considerably, the range of these modules has been defined on a programme-by-programme basis.

The list of courses and their details for each programme is set out in Appendix 2 of the Curriculum.

The primary consideration in selecting courses is acquiring the latest specialist knowledge relevant to the student's research topic and developing the skills necessary for research (e.g., innovation, communication).

Doctoral students participating in the organised programme must register at the start of each semester – during the first week of the semester – in accordance with the study plan set out in their work plan, via the NEPTUN Integrated Study System (hereinafter: NEPTUN TR) for the modules advertised by the AÉTDI.

Assessment and examination

Assessment of knowledge of the course material is conducted in accordance with the course syllabus. The assessment of the course or examination course must be recorded in NEPTUN TR by the lecturer responsible for the assessment.

Exams are organised in accordance with MATE's Organisational and Operational Regulations (Volume III – Student Requirements – Rules for the Organisation of Exams).

Recognition of examinations taken at other higher education institutions

Part of the course requirements may also be fulfilled at a doctoral school of another university (domestic or foreign). The AÉTDI allows, on a case-by-case basis, for the crediting of courses completed by the

doctoral student in the form of ‘webinars’ (online, pre-recorded lectures, test-based examinations), subject to the submission of the full course programme and proof of completion. In light of this, and taking into account the opinion of the Supervising Committee, the Disciplinary Council (hereinafter: TTT) is authorised to approve the recognition of courses (and the corresponding number of credits). In the case of compulsory modules, the number of credits that can be recognised is the same as that specified in the AÉTDI curriculum (10 credits). For optional modules completed at another institution, a maximum of 6 credits, as specified in the relevant DI’s curriculum, may be taken into account. The number of credits obtained at another higher education institution must not exceed 50 per cent of the total credits.

2.5. Sample curriculum

The compulsory, compulsory-elective and optional modules of the AÉTDI 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 lecturers, as well as the recommended placement of each module within the curriculum. The model curricula are set out in Appendix 1, while the list of courses is contained in Appendix 2. The model curricula are drawn up and reviewed by the 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. Distribution and recognition of credits required for the conferment of the doctoral degree

The unit of measurement for academic requirements is the credit. As a general rule, the recognition of one credit requires 30 hours of work on the part of the student (e.g. consultation, study, research, teaching, preparation, etc.). In doctoral programmes, a credit is a unit of measurement for the academic, research, and (where applicable) teaching work, or its equivalent, undertaken by a doctoral student to fulfil their obligations.

Academic activities

Study credits: the total credit value of the modules undertaken and completed by students. Required: min. 40, max. 48 credits.

In doctoral programmes, the minimum number of teaching hours is 100.

Part of the course requirements may also be fulfilled at a doctoral school of another university (domestic or foreign), provided that the full course programme is completed and proof of completion is provided. In light of this, and taking into account the opinion of the Programme Committee, the TTT is authorised to approve the recognition of course credits (and the equivalent number of credits). The number of credits obtained at another higher education institution must not exceed 50 per cent of the total credits. Within AÉTDI, and between MATE’s other doctoral schools, programmes are ‘interchangeable’; modules may be taken in professionally justified cases, and the credits will be recognised.

The completion of credits, based on the examinations, essays, reports, etc., required for the course taken, is certified by the lecturer listed for the student in NEPTUN TR. Credits may only be recognised for courses graded on a five-point scale.

No credits may be recognised for language learning in doctoral programmes.

Pursuant to Section 53(3a) of the Higher Education Act, students preparing for doctoral study may enrol on AÉTDI modules as early as the final academic year of their master's programme. Should they be successfully admitted, the credits earned in this way will be recognised by AÉTDI as prior learning.

Research activities

Research credits: credits that may be collected by a student each semester in recognition of their research work, in proportion to their performance.

Maximum research credits recognisable per semester: 10 credits (semesters 1–4) and 15 credits (semesters 5–8).

Total to be earned: min. 70, max. 100 credits.

Doctoral students carry out their research at the departmental unit or institute designated by the Head of AÉTDI (usually at the supervisor's place of work). In exceptional cases, the research location may also be designated at another domestic or foreign university or research institute (hereinafter: external research location). The head of the AÉTDI decides on the acceptance of an external research site based on the supervisor's recommendation and with the PT's support.

The supervisor proposes the allocation of credit points for research work carried out at an external research site; the allocation of credit points falls within the remit of the TTT, subject to the agreement of the PT.

Publication credits: the student's publications are assigned several credits based on their value. Details of this are set out in Table 2.

Required: at least 30 credits.

The assessment of publication output is based on publications appearing during the relevant period and registered in the Hungarian Repository of Scientific Works (hereinafter: MTMT). The classification of publications is based on the journal list of the Department of Agricultural Sciences of the Hungarian Academy of Sciences (hereinafter: MTA), as well as on rankings from scimagojr.com and Web of Science.

For international students, publications in their native language are considered equivalent to those in Hungarian. Credits may also be recognised for publications that are not directly related to the doctoral candidate's research topic.

Calculation of publication credits

Table 2

Type of publication	Credits
Presentation at a professional event in Hungarian; abstract or poster written in Hungarian and published in a domestic conference proceedings	1
Presentation at a professional event in a world language; abstract or poster written in a foreign language (English) and published in an international conference proceedings	3
A paper (proceeding) written in Hungarian and published in full in a domestic (Hungarian) conference proceedings	2
A paper (proceeding) written in a foreign language (English) and published in full in an international conference proceedings	4

Article in a foreign language published in a Q-rated academic journal; basic credit (the journal's rating determines the exact value and the student's position amongst the authors (first / last/corresponding author))	6
Article in Hungarian in a Q-rated academic journal, base credit (the exact value is determined by the journal's rating and the student's position among the authors (first / last/corresponding author))	3
Article in Hungarian in a scientific journal without a Q classification	3
Article in a foreign language in a scientific journal not indexed in Scopus	3
Specialist article in Hungarian in other journals or publications	1
A specialist article in a foreign language published in another journal or publication	2
Consultation on a specialist or dissertation paper per graduate student *	3
Preparation of a student for an institute/university Student Research Conference*	1
Preparing students for the National Student Research Conference*	3
Participation in a patent application	6
Book excerpt or coursebooks in Hungarian or English (max. 6 credits)	3 or 4 pages

* In the case of co-supervision, the student is entitled to 50 per cent of the credit value.

In the case of a conference presentation, if no written material (abstract or proceedings) is available, credits may be recognised for the presentation given at the conference.

In the Doctoral Programme in Animal Sciences, a presentation given at a round-table conference organised by the Programme is also eligible for credit (presentation at a professional event in Hungarian: 1 credit).

Weighting of publications in peer-reviewed journals when recognising credits

The value of a scientific article is determined by the journal in which the authors published it within the relevant field of science. Previous comparisons based on impact factors did not account for differences across academic disciplines; therefore, the AÉTDI will henceforth apply the quartile classification system (https://researchassessment.fbk.eu/quartile_score) to the weighting of publications. Publications appearing in journals belonging to the Q1–Q4 categories are recognised with the following multipliers: a 5-fold multiplier for the D1 category, a 4-fold multiplier for the Q1 category, a 3-fold multiplier for the Q2 category, a 2-fold multiplier for the Q3 category and a 1-fold multiplier for the Q4 category.

In the case of multi-authored articles, if the student is listed in a prominent position on the list of authors – as the first, last or corresponding author – the student will, naturally, receive the credit value to which they are entitled according to the credit table.

If the student is not the first, last, or corresponding author in the list of authors, they are entitled to only 50 per cent of the weighted credit value.

Table 3 shows the calculation of the credits that may be recognised for articles published in various Q-category academic journals.

Table 3

Author position	Credit basis	Journal category	Article type	Q multiplier	Total credits
Featured	6	D1	Specialist article	6 (100%)	36

Featured	6	Q1	Specialist article	4 (100%)	24
Featured	6	Q2	Specialist article	3 (100%)	18
Featured	6	Q3	Specialist article	2 (100%)	12
Featured	6	Q4	Specialist article	1 (100%)	6
Not featured	6	D1	Specialist article	5 (50%)	15
Not featured	6	Q1	Specialist article	4 (50%)	12
Not featured	6	Q2	Specialist article	3 (50%)	9
Not featured	6	Q3	Specialist article	2 (50%)	6
Not featured	6	Q4	Specialist article	1 (50%)	3

Teaching activities

The supervisor may, with the agreement of the relevant department or the director of the institute, involve the doctoral student in teaching work or in the performance of other departmental or institutional duties; however, this may only be to an extent that does not hinder the doctoral student in carrying out their own duties. The student's work schedule must be arranged so that they can fulfil their academic, examination-preparation, and research obligations and attend compulsory programmes. The details of the doctoral student's teaching duties must be set out in a contract.

Teaching credit: credit recognised for a student's participation in teaching. As a course tutor, 4 credits may be recognised for teaching 2 hours per week or more. Active participation in the teaching of a course, not exceeding 2 hours per week, is worth 2 credits. When teaching in a foreign language, Hungarian students are entitled to additional credits (+2). All teaching activities must be verified by a statement downloaded from NEPTUN TR (in accordance with Appendix 8 of the MATE Student Requirements System). A maximum of 4 credits (semesters 1–4) or 2 credits (semesters 5–8) may be counted per semester (24 credits in total).

Individual consultation activities undertaken by a doctoral student relating to talent management and the training of the next generation of academics amongst students enrolled in undergraduate or master's programmes (e.g. supervision of a student research society or a dissertation), or other professionally relevant activities that can be objectively assessed, such as the assessment of a dissertation or thesis, mentoring or other activities, as recommended by the doctoral student's supervisor, may be counted towards the fulfilment of teaching credits. The credit value is determined on an individual basis, based on the time spent on consultation and preparation. As a general rule, 1 credit may be recognised for 30 hours of work.

Other credits: domestic or international academic awards or honours awarded to the student, or participation in professional forums. The value of these is assessed by the supervisor, up to a maximum of 4 credits.

Each year, the doctoral student prepares a written report on the completion of the activities planned in advance in the research work plan, which includes all the applications and supporting documents required for the accounting of the study, teaching and research credits earned, including a detailed summary of the student's publication activity (based on data recorded in the MTMT database). The template for the assessment form is set out in Annex 5 of the AÉTDI Rules of Procedure and is also available on the AÉTDI E-learning portal.

Doctoral students must upload the completed assessment form, signed by their supervisor, to the AÉTDI E-learning portal by 20 June each year at the latest, or by 10 January in the case of a two-semester programme. The programme director and the doctoral programme secretary review these and inform the members of the Programme Committee (PT) about the doctoral students' progress at the PT meeting.

The programme director, with the involvement of the Programme Committee where necessary, investigates cases in which the supervisor has stated on the assessment form that the doctoral student should be excluded or is unsuitable for research work, as well as cases of significant deviations from the work plan. The Supervisory Committee makes a recommendation; the Doctoral Training Committee examines it; and, based on this recommendation, the Head of the AÉTDI decides whether to allow the doctoral work to continue, terminate it, or amend the work plan.

The specific provisions relating to cooperative doctoral programmes are set out in Section 3(19) and Section 20 of the EDSZ.

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 regulated by Section 24 of the EDSZ.

The complex examination is a form of assessment designed to summarise and review the knowledge acquired by doctoral students participating in the programme or applying as independent candidates in their field of research.

The complex examination must be taken by the end of the fourth semester at the latest, marking the conclusion of the training and research phase. Students participating in the organised programme must register for the complex examination in writing via NEPTUN TR, in accordance with the provisions set out in Section 24(1) of the EDSZ. Students who have completed at least 70 credits during the training and research phase of the doctoral programme (the first four semesters) may register for the complex examination.

A prerequisite for sitting the complex examination is the acquisition of all the 'training credits' prescribed in this curriculum.

The complex examination must be organised by the end of the examination period of the fourth active semester at the latest, so that the credits earned during that semester can also be counted towards the degree.

Complex examination period: June–July or January (during the intersession). The doctoral student will be notified of the date of the complex examination by the programme secretary.

Doctoral students must submit their doctoral dissertation 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.

The theoretical part of the complex examination in the Doctoral Programme in Animal Sciences

For the theoretical part of the complex examination, the student shall compile a list of topics for the compulsory and elective modules, agreed with the supervisor and the Head of the Doctoral Programme, together with a bibliography for each topic. The topics provide the examination board with information on the content of the student's training.

Major module: The biological and environmental aspects of animal husbandry.

Minor module: Research and evaluation methodology.

The theoretical part of the complex examination in the Doctoral Programme in Food Science

The candidate shall sit an examination in at least two modules and/or topics. The theoretical examination may also include a written component.

Modules of the complex examination

Food Chemistry
Food Analysis
Nutritional Science
Food microbiology
Food biotechnology
Microbiological Methods
Enzymology
Molecular Biology and Genetics
Food Industry Operations
Food Industry Process Control
Food physics
Preservation methods
Fermentation processes
Cereal and industrial crop processing
Processing of raw materials of animal origin
Quality control in the food industry
Food storage and packaging
Biometrics
Environmental protection in the food industry
Food quality and safety.

The theoretical part of the complex examination in the Doctoral Programme in Plant and Horticultural Sciences

In line with their research topic, students will be asked questions from two of the following modules.

Topics in plant physiology, genetics and biotechnology

1. Plant Metabolism, Physiology and Molecular Biology
2. Plant growth physiology and reproduction biology
3. Plant cell biotechnology and tissue culture
4. Classical and molecular plant genetics, plant breeding
5. Plant molecular transformation and transgenic plants
6. Genetics of biotic and abiotic stress and breeding
7. Genetics and breeding of cereals
8. Genetics and breeding of industrial crops
9. Genetics and breeding of forage crops
10. Genetics and breeding of vegetable crops
11. Genetics and breeding of woody plants.

Topics in arable crop production and soil management

1. Community ecology and population genetics
2. Soil biology and soil-plant interactions
3. Ecosystem regulation and gene conservation
4. Precision and integrated methods in crop production
5. Sustainable soil management and land use
6. Application of agrotechnical methods to mitigate climate damage
7. The impact of abiotic and biotic factors on arable crop production
8. Lawns, sports turf and environmental grasslands
9. Assessment of the current state of irrigation and the need for its development.

Plant protection and pathophysiology

1. Characterisation of animal communities and trophic networks in arable and horticultural crops, and their implications for plant protection
2. Diseases of arable and horticultural crops, their phytopathological aspects and implications for plant protection
3. Botanical and weed-related aspects of arable and horticultural crops, and their implications for weed control
4. Analysis of the tools and principles of integrated plant protection
5. Theoretical aspects of the integrated protection of arable and horticultural crops
6. Characterisation of the agricultural landscape and its individual components in terms of plant protection, and their role in relation to ecosystem services
7. Biological and ecological plant protection
8. Analysis of innovative plant protection methods
9. Virology and bacteriology in horticultural plant protection
10. Mycology in horticultural plant protection
11. Horticultural Plant Protection Entomology
12. Horticultural Plant Protection Acarology
13. Weed biology, weed control.

Horticultural topics

1. Fungal ecology and coenology
2. The biological principles of vegetable cultivation
3. Use of modern vegetable propagating material
4. Intensive mushroom cultivation technologies
5. Control of environmental factors in vegetable production

6. Systems for utilising covered areas
7. Fruit breeding, variety evaluation and practical pomology
8. Cultivation systems and production technologies in fruit growing
9. Biology of flowering and fertilisation in fruit-bearing plants, and variety classification
10. Biological and technological aspects of post-harvest operations
11. Active ingredients in medicinal plants and factors influencing their accumulation
12. Natural and agricultural systems producing specialised substances and their optimisation
13. Post-harvest and secondary processing of medicinal plants
14. Production biology and environmental control requirements of greenhouse ornamental plants
15. Biological principles of the cultivation and use of herbaceous ornamental plants
16. Biology of reproduction and propagation of woody ornamental plants and their technological systems
17. Post-harvest technologies for ornamental plants: biological and technological principles
18. Biological principles of viticulture, variety evaluation, breeding and propagation
19. The role of the growing site in the nutrient and water management of vines
20. Modern trends in viticulture
21. Oenological chemistry, the biochemical principles of winemaking.

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 the doctoral programme. A total of 180 credits must be completed to obtain the absolutorium.

Table 4

Types of activities	Number of credits to be completed	
	In semesters 1–4	Semesters 5–8
Academic activities	minimum: 40 maximum: 48	-
Research activities		
- Research work	minimum: 28 maximum: 40	minimum: 42 maximum: 60
- Publications	*	minimum: 30
Teaching	maximum: 16	maximum: 8
Total number of credits to be earned:	minimum: 90	minimum: 90

*The DI does not require compulsory publication credits in semesters 1–4, except the József Farkas Food Science DP, where the requirement for the complex examination is at least 1 publication in Q1–Q3 (minimum 6 credits)

If the credit requirement is exceeded, credits may be carried over from semesters 1–4 to semesters 5–8. The student must submit an application for the recognition of the certificate of completion.

2.9. The degree conferment procedure

The procedure for obtaining a doctoral degree is regulated in detail by Chapter VII of the EDSZ and Sections XV and XVIII of the AÉTDI Rules of Procedure. In accordance with Section 26 of the EDSZ, a doctoral dissertation may be submitted once the student has obtained their certificate of completion in a structured programme, fulfilled the language and publication requirements set by the AÉTDI, and completed the public defence.

FINAL PROVISIONS

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

Gödöllő, 27 August 2026

Dr Csaba Gyuricza
Rector, Chair of the Senate

Appendices:

Appendix 1: Sample curricula (Doctoral Programme in Animal Sciences, József Farkas Doctoral Programme in Food Science, Doctoral Programme in Plant and Horticultural Sciences)

Appendix 2: Modules taught as part of the doctoral (PhD) programme and their descriptions

Sample curriculum of the Doctoral School of Animal Sciences										
Course Unit	Activities within the course unit	Training and research part				Research and dissertation part				Total
		1 st term	2 nd term	3 rd term	4 th term	5 th term	6 th term	7 th term	8 th term	
I. Academic credits	Design and statistical evaluation of experiments (with different titles and lecturers for each module group)	10								min.40, max.48
	Topic: Preparation of scientific papers and dissertations (with different titles and lecturers for each topic group)		10							
	Compulsory elective modules by module group (at least 1 module must be chosen)			6 or 8	6 or 8					
	Optional modules per module group			6	6					
II. Research credits (the maximum number of credits available per semester is shown in the cells)	Independent research carried out under the supervision of a supervisor, which forms the basis for the dissertation to be written.	10	10	10	10	15	15	15	15	min.70, max.100
III. Academic credits (the maximum number of credits that can be recognised per semester is shown in the cells)	Recognised for the student's participation in teaching	4	4	4	4	2	2	2	2	max. 24
IV. Publication credits	Details of the credit calculation are set out in Annex 1 to the curriculum	not linked to a semester								min. 30 Total requirement: min. 180 credits

József Farkas Doctoral Programme in Food Science: Sample Curriculum

Course unit	Activities within the module	Semesters								Total
		1.	2.	3.	4.	5.	6.	7.	8.	
Courses	Compulsory module: Statistical Methods	10								10
	Compulsory module: Options for publishing research findings in international academic journals	10								10
	Compulsory elective module: e.g. Developments in sensory science (at least 1 module must be chosen)		8*							8
	Elective module: e.g. Chapters in Animal Product Processing Technologies			6*						6
	Elective module: e.g. Biometrics				6*					6
	<i>Total</i>									<i>minimum 40, maximum 49</i>
Research credits	Independent research carried out under the supervision of a supervisor, which forms the basis of the dissertation to be written (laboratory and field experimental work).	10	10	10	10	15	15	15	15	<i>minimum 70 maximum 100</i>
Teaching credits	Practical training supervision, topic supervision (with Neptun confirmation)					2**	2**	4**	4**	maximum 24
Publication credits	As per Annex 1 of the curriculum				min 3	min 2	3 ^x	3 ^x	18 ^x	<i>minimum 30</i>
Total		30	18	16	19	19	20	22	36	180

*Can be taken at any time during semesters 1–4

** Can be taken at any time during semesters 1–8, but are not compulsory

^x May vary depending on the nature of the publication

Sample curriculum for the Doctoral Programme in Plant and Horticultural Sciences

Course Unit	Activities within the module	Semesters								Total
		1	2	3	4	5	6	7	8	
Courses	Compulsory module: Statistical Methods		1							10
	Compulsory module: Opportunities for publishing research findings in international academic journals or Publication and presentation of experimental results, and the preparation of a dissertation, with particular emphasis on the use of AI	1								10
	Compulsory elective module: e.g. Molecular taxonomy, phylogenetics and phylogeography (at least 1 module must be chosen)			8						8
	Elective module: e.g. Light, fluorescence and confocal microscopy			6						6
	Elective module: e.g. Applied soil microbiology									6
	Elective module: e.g. Virus genetics and virus diagnostics									6
	<i>Total</i>									44 (minimum 40)
Research credits	Independent research carried out under the supervision of a supervisor, which forms the basis of the dissertation to be written (laboratory and field experimental work).	1	1	1		1	1	1	1	93 (minimum 70)
Teaching credits	Practical training supervision, topic supervision (with Neptun certificate)					2		4		6
Publication credits	As per Annex 1 of the curriculum					4	6	6	1	37 (minimum 30)
Total		2	2	2		2	2	2	2	180

Complex examination: During the doctoral programme, the complex examination must be taken at the end of the fourth semester. No additional credits are recognised for this.

2. Modules taught as part of the doctoral (PhD) programme and their descriptions

2.1. Compulsory modules

The Doctoral School of Agricultural and Food Sciences **has two compulsory modules**, which all students must complete following a broadly identical syllabus; these are worth 10 credits each.

1. Experimental Design and Statistical Analysis

Course title	Statistical Methods
Credits	10
Lecturer in charge of the course	Dr Márta Ladányi, Professor (Buda and Szent István Campuses)

Course title	Experimental Design and Statistical Analysis
Credits	10
Course coordinator	Dr György Kövér, Associate Professor (Kaposvár Campus)

Course title	Methodology of Data Collection and Analysis
Credits	10
Course coordinator	Dr László Menyhárt, Associate Professor (Georgikon Campus)

2. Topics in scientific publication and dissertation writing

Course title	Opportunities for publishing research findings in international academic literature
Credits	10
Lecturer in charge	Dr Attila Hegedűs, Professor (Buda Campus)

Course title	Communication and presentation of experimental results, preparation of a dissertation, with particular regard to the use of AI
Credits	10
Course coordinator	Dr Zoltán Pék, Professor (Szent István Campus)

Course title	Introduction to Academic Writing
Credits	10
Lecturer in charge of the course	Dr Ákos Horváth, University Lecturer (Szent István Campus)

Course title	Writing Academic Papers and Theses
Credits	10
Course coordinator	Dr András Szabó, Professor (Kaposvár Campus)

Course title	Scientific Communication
Credits	10
Course coordinator	Dr Szabolcs Tamás Nagy, University Lecturer (Georgikon Campus)

2.2 Compulsory elective and optional modules

In addition to the two compulsory modules, students may choose from compulsory elective modules (totalling 8 credits, with a minimum of one to be selected) and optional modules (totalling 6 credits). As the research topics of students in the various disciplines and their respective specialisms vary considerably, the range of these modules has been defined on a programme-by-programme basis.

Doctoral Programme in Animal Sciences

Theme group: Aquaculture and Fisheries Management

Course title: **Reproductive Biology of Fish**
 Credits: 8
 Lecturer in charge: Dr Tamás Müller, Professor

Course title: **Fish Genetics and Genomics**
 Credits: 8
 Lecturer in charge: Dr Balázs Kovács, Senior Research Fellow

Course title: **Intensive fish farming in fish ponds**
 Credits: 8
 Lecturer in charge: Dr Tamás Szabó, University Professor

Course title: **Intensive fish farming in closed systems**
 Credits: 8
 Lecturer in charge: Dr Ákos Horváth, university lecturer

Course title: **Fish farming in Central Europe**
 Credits: 6
 Lecturer in charge: Dr Ákos Horváth, Professor

Course title: **Advanced Fish Farming**
 Credits: 6
 Lecturer in charge: Dr László Mátyás Horváth, Professor Emeritus

Course title: **Aquaristics**

Credits: 6

Lecturer in charge: Dr Gábor Beliczky

Course title: **Fish and Fisheries Biology**

Credits: 6

Lecturer in charge: Dr András Specziár

Course title: **Gene Preservation, Conservation Genetics**

Credits: 6

Lecturer in charge: Dr Tamás Gergely Molnár

Course title: **Fisheries Economics**

Credits: 6

Lecturer in charge: Dr Csaba Hancz

Course title: **Intensive Aquaculture**

Credits: 6

Lecturer in charge: Dr Balázs Kucska

Course title: **Fish Physiology**

Credits: 6

Lecturer in charge: Dr Miklós Mézes

Module group: Animal Breeding and Genetics

Course title: **Application of molecular genetic methods in animal breeding**

Credits: 6

Course coordinator: Dr Attila Zsolnai, scientific adviser

Course title: **Application of Artificial Intelligence in Animal Breeding**

Credits: 6

Lecturer in charge: Dr György Kövér, Associate Professor

Course title: **Anthrozoology (the scientific basis of human–animal interactions)**

Credits: 6

Lecturer in charge: Dr Marcell Molnár, Associate Professor

Course title: **Animal-assisted activities**

Credits: 6

Course coordinator: Dr Marcell Molnár, Associate Professor

Course title: **Animal Breeding Genetics**

Credits: 6

Lecturer in charge: Dr Péter J. Polgár, Associate Professor

Course title: **Pigeon Breeding**

Credits: 6

Lecturer in charge: Dr Tamás Donkó, Associate Professor

Course title: **Milking Technology and Dairy Production Hygiene**

Credits: 6

Lecturer in charge: Dr Péter Póti, Professor

Course title: **Biology of the European rabbit**

Credits: 6

Course coordinator: Dr Zsolt Gerencsér, Senior Research Fellow

Course title: **Genetics of the domestic rabbit**

Credits: 6

Lecturer in charge: Dr Zsolt Gerencsér, Senior Research Fellow

Course title: **Technology of Sheep Milk and Meat Production**

Credits: 6

Lecturer in charge: Dr Péter Póti, University Professor

Course title: **Goat Farming Management Technology**

Credits: 6

Lecturer in charge: Dr Ferenc Pajor, Associate Professor

Course title: **Dog Breeding**

Credits: 6

Lecturer in charge: Dr Virág Ács, Assistant Lecturer

Course title: **Horse Breeding**

Credits: 6

Lecturer in charge: Dr Árpád Bokor, Associate Professor

Course title: **Population Genetics**

Credits: 6

Lecturer in charge: Dr István Nagy, Professor

Course title: **Swine Genetics**

Credits: 6

Course coordinator: Dr István Nagy, Professor

Course title: **Swine Production Technology**

Credits: 6

Lecturer in charge: Dr Henrietta Kiszlinger Nagyné, Associate Professor

Course title: **Cattle Farming**

Credits: 6

Lecturer in charge: Dr Péter J. Polgár, Associate Professor

Course title: **Cattle Breeding**

Credits: 6

Lecturer in charge: Dr Gabriella Holló, Associate Professor

Course title: **Cattle Breeding**

Credits: 6

Lecturer in charge: Dr Szabolcs Albin Bene, Associate Professor

Course title: **Bovine products and their classification**

Credits: 6

Lecturer in charge: Dr Péter J. Polgár, Associate Professor

Course title: **The Application of Sensors in Animal Husbandry**

Credits: 6

Lecturer in charge: Dr Levente Kovács, Professor

Course title: **Population Genomics**

Credits: 6

Lecturer in charge: Dr Ino Curik, Research Professor

Course title: **Laboratory Practicum in Molecular Biology Methods**

Credits: 6

Course coordinator: Dr Attila Zsolnai, Scientific Adviser

Course title: **Application of Molecular Genetic Methods in Animal Breeding**

Credits: 6

Course coordinator: Dr István Anton, Research Advisor

Course title: **Conservation Genetics**

Credits: 6

Course coordinator: Dr Ino Curik, Research Professor

Course title: **Tropical and Subtropical Animal Husbandry**

Credits: 6

Lecturer in charge: Dr Ákos Bodnár

Module group: Animal Physiology and Nutrition

Course title: **Biochemistry and Physiology of Animal Product Production**

Credits: 8

Lecturer in charge: Dr Melinda Kovács, University Lecturer

Course title: **History of Scientific Thought**

Credits: 6

Lecturer in charge: Dr Csaba Hancz, Professor Emeritus

Course title: **Ethics of Animal Experimentation**

Credits: 6

Lecturer in charge: Dr Ágnes Csivincsik, Senior Research Fellow

Course title: **Poultry Nutrition**

Credits: 6

Lecturers in charge of the course: Dr Károly Dublec, Professor (Georgikon Campus), Dr Veronika Halas, Professor (Kaposvár Campus)

Course title: **Swine Feeding**

Credits: 6

Lecturer in charge of the course: Dr Veronika Halas, university lecturer

Course title: **General Animal Nutrition**

Credits: 6

Lecturer in charge: Dr Károly Dublec, university lecturer

Course title: **Parasitic diseases of farm animals and companion animals from a One Health perspective**

Credits: 6

Lecturer in charge: Dr Ágnes Csivincsik, Senior Research Fellow

Course title: **Feeding of ruminants**

Credits: 6

Lecturer in charge: Dr Róbert Tóthi, Associate Professor

Course title: **Lipids in the Animal Organism**

Credits: 6

Lecturer in charge: Dr András Szabó, Professor

Course title: **Application of the One Health approach in animal product production**

Credits: 6

Lecturer in charge: Dr Ágnes Csivincsik, Senior Research Fellow

Course title: **Feed Analysis**

Credits: 6

Lecturer in charge: Dr Éva Visi Vargáné, Associate Professor

Course title: **Stress Physiology and Analytical Methods of Forage Crops**

Credits: 6

Lecturer in charge: Dr Ildikó Jócsák, Assistant Professor

Course title: **Grassland Production and Utilisation**

Credits: 6

Lecturer in charge: Dr Richárd Hoffmann, associate professor

Course title: **The relationship between microelements and animal metabolism**

Credits: 6

Lecturer in charge: Dr Krisztián Balogh, Professor

Course title: **The Physiological Basis of Environmental Adaptation in Domestic Animals**

Credits: 6

Lecturer in charge: Dr Ferenc Husvéth, Professor

Course title: **Production Physiology**

Credits: 6

Lecturer in charge: Dr Ferenc Husvéth, Professor

Course title: **Environmental Aspects of Animal Nutrition**

Credits: 6

Lecturer in charge: Dr László Pál, Professor

Course title: **Physiology and Anatomy of Poultry**

Credits: 6

Lecturer in charge: Dr László Pál, Professor

Course title: **Equine Nutrition**

Credits: 6

Lecturer in charge: Dr Ádám Bartos, associate professor

Course title: **Physiology and Biochemistry of Meat and Fat Production**

Credits: 6

Lecturer in charge: Dr Miklós Mézes, Professor

Course title: **New Trends in Animal Nutrition**

Credits: 6

Lecturer in charge: Dr Miklós Mézes, Professor

Course title: **Feed Toxicology**

Credits: 6

Lecturer in charge: Dr Miklós Mézes, Professor

Course title: **Mycotoxicoeses**

Credits: 6

Lecturer in charge: Dr Miklós Mézes, Professor

Course title: **Lipid Peroxidation and the Biological Antioxidant System**

Credits: 6

Lecturer in charge: Dr Miklós Mézes, Professor

Course title: **Feed Analysis**

Credits: 6

Lecturer in charge: Dr Márta Balláné Erdélyi, Associate Professor

Course title: **By-products and Environmental Protection**

Credits: 6

Lecturer in charge: Dr Márta Balláné Erdélyi, Associate Professor

Course title: **Instrumental Analysis**

Credits: 6

Lecturer in charge: Dr László Wágner

Course title: **Feed and Food Analysis**

Credits: 6

Lecturer in charge: Dr László Wágner

Module group: Wildlife Biology

Course title: **Game Management and Habitat Management**

Credits: 8

Course coordinator: Dr Miklós Heltai, university lecturer

Course title: **Ethology and Behavioural Ecology**

Credits: 8

Lecturer in charge: Dr Krisztián Katona, University Lecturer

Course title: **Mammalian Predator Species: Ecological Role, Conservation and Management**

Credits: 6

Lecturer in charge: Dr Miklós Heltai, Professor

Course title: **Regulation of Game Management and Hunting in Hungary and the European Union**

Credits: 6

Lecturer in charge: Dr Miklós Heltai, University Professor

Course title: **Modern Technological Knowledge in Wildlife Biology Research**

Credits: 6

Lecturer in charge: Dr Gergely Schally, Senior Research Fellow

Course title: **Didactic Seminar for Wildlife Biologists**

Credits: 6

Lecturer in charge: Dr Mihály Márton, Associate Professor

Course title: **Research Methodology in Wildlife Biology**

Credits: 6

Lecturer in charge: Dr Zsolt Biró, Associate Professor

Course title: **Theoretical Foundations of Wildlife Biology**

Credits: 8

Lecturer in charge: Dr Sándor Csányi, Professor

Course title: **Small Game Management**

Credits: 8

Lecturer in charge: Dr Sándor Csányi, Professor

Course title: **Big Game Management**

Credits: 8

Lecturer in charge: Dr Sándor Csányi, university lecturer

Course title: **Urban Wildlife Management**

Credits: 6

Lecturer in charge: Dr Miklós Heltai, university lecturer

Course title: **Nature and Wildlife Conservation**

Credits: 6

Lecturer in charge: Dr Krisztián Katona, university lecturer

Animal Biotechnology Research Group

Course title: **Applied Mammalian Embryology**

Credits: 8

Course coordinator: Dr Elen Gócza, Research Advisor

Course title: **Transgenesis and targeted genome editing in farm animals**

Credits: 6

Course coordinator: Dr Lilla Bodrogi, Senior Research Fellow

Course title: **Application of molecular genetic methods in animal breeding**

Credits: 8

Course coordinator: Dr Attila Zsolnai, Scientific Adviser

Course title: **Gene mapping in domestic animals**

Credits: 6

Lecturer in charge: Dr László Hiripi, scientific adviser

Course title: **Genetic reprogramming and its application in mammals**

Credits: 6

Lecturer in charge: Dr András Dinnyés, Professor

Course title: **Fundamentals of Cell Biology**

Credits: 6

Lecturer in charge: Dr Szabolcs Tamás Nagy, Professor

In the field of reproductive biotechnology

Course title: **Reproductive Biotechnology – Assisted Reproductive Techniques**

Credits 8

Course coordinator: Dr Szilárd Bodó, scientific adviser

Course title: **Cytogenetics in Animal Breeding**

Credits 6

Course coordinator: Dr András Hidas, Senior Research Fellow

Course title: **Incubation Biology**

Credits: 6

Lecturer in charge: Dr Krisztina Liptói, Senior Research Fellow

Course title: **Applied Reproductive Biology in Goose Breeding**

Credits: 6

Lecturer in charge: Dr Kisné Dr Do Thi Dong Xuan

Course title: **Reproductive Biology of Birds**

Credits: 6

Lecturer in charge: Dr Barbara Végi

PhD Programme in Food Science

The language of instruction is English.

Course title	Modern Analytical Techniques and Methods
Credits	8
Lecturer in charge of the course	Dr Péter Fodor, university lecturer

Course title	Process Measurement and Optimisation
Credits	8
Course coordinator	Dr Zoltán Kovács, Professor

Course title	The Development of Sensory Science
Credits	8
Lecturer in charge of the course	Dr Zoltán Kókai, Professor

Course title	New Trends in Molecular Biology
Credits	8
Course coordinator	Dr Ágnes Belák, Associate Professor

Course title	Microbiological Food Safety and Quality
Credits	8
Course coordinator	Dr Gabriella Kiskó, Professor

Course title	Selected Chapters from the Science of Nutrition
Credits	8
Course coordinator	Dr Livia Sarkadi Simonné, University Lecturer

Course title	Food Biotechnology
Credits	8
Course coordinator	Dr Nguyen Duc Quang, Professor

Course title	Product Development in the Food Industry
Credits	8
Course coordinator	Dr László Friedrich, Professor

Course title	Statistical Case Studies in Food Science
Credits	8
Course coordinator	Dr László Baranyai, Professor

Course title	The Role of Additives and Rheology in Product Development
Credits	6
Course coordinator	Dr Beatrix Szabó-Nótin, Associate Professor

Course title	I Living Lab – Artificial Intelligence Project
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Credits	6
Course coordinator	Dr Zoltán Gillay, Associate Professor
Course title	Chapters in Animal Product Processing Technologies
Credits	6
Course coordinator	Dr Adrienn Tóth Vargáné, Research Fellow
Course title	I Living Lab – Wellbeing
Credits	6
Course coordinator	Dr Adrienn Tóth Vargáné, Research Fellow
Course title	I Living Lab – Circular Economy
Credits	6
Course coordinator	Dr Zoltán Kókai, University Lecturer
Course title	Applied Mathematics for Life Sciences
Credits	6
Course coordinator	Dr József Baranyi, private lecturer
Course title	Electromagnetic properties of foods
Credits	6
Course coordinator	Dr Zoltán Gillay, Associate Professor
Course title	Biometrics
Credits	6
Course coordinator	Dr Márta Ladányi, Professor
Course title	Multivariate Statistical Methods
Credits	6
Lecturer in charge of the course	Dr András Ittész, Associate Professor
Course title	Erasmus Blended Intensive Programmes (BIP)
Credits	6
Course coordinator	Dr Adrienn Tóth Vargáné, Research Fellow
Course title	Methods of Quantitative Analytical Determination
Credits	6
Course coordinator	Dr László Péter Abrankó, Professor
Course title	Image Processing in Food Research
Credits	6
Lecturer in charge of the course	Dr Ferenc Firtha, Associate Professor
Course title	Animal Product Technologies
Credits	6
Course coordinator	Dr László Ferenc Friedrich, Professor

Course title	Characterisation of Particles
Credits	6
Course coordinator	Dr András Koris, Professor
Course title	Food Industry Management
Credits	6
Course coordinator	Dr Zoltán Károly Lakner, Professor
Course title	Wine-making in a nutshell
Credits	6
Course coordinator	Dr Diána Ágnes Nyitrai Sárdy, University Lecturer

Doctoral Programme in Plant and Horticultural Sciences

Horticultural Science Research Group

Course title	Production Biology of Horticultural Crops
Credits	8
Lecturer in charge of the course	Dr Jenő Bernáth, Professor Emeritus
Course title	Advances in molecular plant biology and their applications in horticulture
Credits	8
Course coordinator	Dr István Papp, Professor
Course title	Classical and Molecular Genetics
Credits	8
Course coordinator	Dr Zsuzsanna Benyóné György, Professor
Course title	Biology of Reproduction and Propagation, Development of Propagation Technology
Credits	8
Lecturer in charge of the course	Dr Károly Hrotkó, Professor Emeritus
Course title	Molecular Taxonomy, Phylogenetics and Phylogeography
Credits	8
Course coordinator	Dr Mária Höhn, Professor
Course title	The Application of Molecular Techniques in Plant Breeding
Credits	6
Course coordinator	Dr Júlia Halász, Professor

Course title	Applications of Bioinformatics in Research into Plant Protein Evolution
Credits	6
Course coordinator	Dr Attila Hegedűs, Professor
Course title	Modern ornamental plant cultivation methods and variety evaluation
Credits	6
Lecturer in charge of the course	Dr Péter Honfi, Associate Professor
Course title	Microproliferation of Ornamental Plants
Credits	6
Lecturer in charge of the course	Dr István Dániel Mosonyi, Assistant Professor
Course title	Conservation and Breeding of Perennial Ornamental Plants
Credits	6
Course coordinator	Dr Ildikó Kohut, Associate Professor
Course title	Dendrological variety evaluation and breeding
Credits	6
Lecturer in charge of the course	Dr Magdolna Diószegi Sütöriné, Associate Professor
Course title	Physiological and ecological foundations of the introduction of medicinal and aromatic plants
Credits	6
Course coordinator	Dr Éva Németh Zámboriné, Professor
Course title	Genetic Basis and Breeding of Medicinal and Aromatic Plants
Credits	6
Lecturer in charge of the course	Dr Éva Németh Zámboriné, Professor
Course title	Active Ingredients of Medicinal Plants
Credits	6
Lecturer in charge of the course	Dr Zsuzsanna Pluhár, Professor
Course title	Methods and Results of Variety Evaluation Research in Fruit Growing
Credits	6
Lecturer in charge of the course	Dr László Szalay, Professor

Course title	Environmental Adaptability of Fruit-bearing Plants
Credits	6
Lecturer in charge of the course	Dr László Szalay, Professor
Course title	Biological and Technological Aspects of Modern Fruit Storage
Credits	6
Lecturer in charge of the course	Dr Gergely Simon, Associate Professor
Course title	Technological Innovations in Integrated Production
Credits	6
Lecturer in charge of the course	Dr Gergely Simon, Associate Professor
Course title	Oenological Chemistry, the Biological Foundations of Winemaking
Credits	6
Lecturer in charge of the course	Dr Diána Sárdy Nyitrai, Professor
Course title	The role of the growing area in viticulture
Credits	6
Lecturer in charge of the course	Dr Péter Bodor-Pesti, Associate Professor
Course title	Organoleptic Assessment and Tasting Techniques in Winemaking
Credits	6
Lecturer in charge of the course	Dr Diána Sárdy Nyitrai, university lecturer
Course title	Scientific Foundations of Vegetable Production
Credits	6
Lecturer in charge of the course	Dr András Geösel, Associate Professor
Course title	Regulation of ecological conditions in vegetable production
Credit	6
Lecturer in charge of the course	Dr Noémi Kappel, Professor
Course title	Modern Use of Propagation Material in Vegetable Production
Credits	6
Lecturer in charge	Dr Noémi Kappel, university lecturer

of the course

Course title **Intensive Mushroom Cultivation Technologies**

Credits 6

Course coordinator Dr András Geösel, Associate Professor

Course title **Virology**

Credits 6

Lecturer in charge of the course Dr Erzsébet Koósné Szathmáry, Assistant Professor

Course title **Insect Taxonomy**

Credits 6

Lecturer in charge of the course Dr Viktor Markó, Professor

Course title **Fundamentals of Insect Anatomy**

Credits 6

Lecturer in charge of the course Dr Viktor Markó, Professor

Course title **The Ecological Foundations of Plant Protection Zoology**

Credits 6

Lecturer in charge of the course Dr Viktor Markó, Professor

Course title **Phytobacteriology**

Credits 6

Course coordinator Dr Anita Karacs-Végh, Associate Professor

Course title **Environmentally Friendly Control of Horticultural Pest Populations**

Credits 6

Course coordinator Dr József Fail, Associate Professor

Course title **Current scientific issues in organic farming**

Credits 6

Course coordinator Dr Péter Pusztai, Associate Professor

Course title **Genetic Determinants of Economically Important Traits in Horticultural Crops**

Credits 6

Lecturer in charge of the course Dr Júlia Halász, Professor

Course title	Light, Fluorescence and Confocal Microscopy
Credits	6
Course coordinator	Dr Katalin Jäger, Senior Research Fellow
Course title	An Ecological Approach to Nature-Based Solutions
Credits	6
Course coordinator	Dr Anna Mária Csergő, Associate Professor
Course title	Environmental and Functional Microbiology of Horticultural Systems
Credits	6
Course coordinator	Dr Tamás Kocsis, Associate Professor
Course title	Plant Microbiome and Post-Harvest Microbiology in Horticultural Practice
Credits	6
Lecturer in charge of the course	Dr Tamás Kocsis, Associate Professor
Course title	Instrumental Methods in Fruit Analysis
Credits	6
Lecturer in charge of the course	Dr Gitta Ficzek, Associate Professor
Course title	Plant Cell and Tissue Culture
Credits	6
Lecturer in charge of the course	Dr Éva Preininger
Plant Science Research Group	
Course title	Plant Molecular Genetics and Molecular Breeding
Credits	8
Course coordinator	Dr Erzsébet Kiss, Professor Emeritus
Course title	Classical and Detailed Plant Breeding
Credits	8
Course coordinator	Dr Lászlóné Hajós, former associate professor
Course title	Integrated Plant Protection
Credits	8
Lecturer in charge of the course	Dr József Kiss, Professor

Course title	Theoretical Foundations of Biological Plant Protection
Credits	8
Lecturer in charge of the course	Dr György Turóczi, Associate Professor
Course title	Evaluation of Integrated Arable Crop Protection Methods
Credits	8
Course coordinator	Dr Zoltán Pálincás, Associate Professor
Course title	Insect Pheromones and Their Chemical Ecology
Credits	8
Lecturer in charge of the course	Dr Gábor Szócs, PhD (Hungarian Academy of Sciences)
Course title	Plant Pathogens
Credits	8
Lecturer in charge of the course	Dr Rita Bán, university lecturer
Course title	Biotic Stress
Credits	8
Lecturer in charge of the course	Dr Balázs Barna, Associate Professor
Course title	General and Plant Pathological Mycology
Credits	8
Lecturer in charge of the course	Dr Katalin Körösi, Associate Professor
Course title	Herbology
Credits	8
Lecturer in charge of the course	Dr Zita Dorner, Associate Professor
Course title	Integrated Weed Management
Credits	8
Lecturer in charge of the course	Dr Mihály Zalai, Associate Professor
Course title	Invasive Pests
Credits	8
Lecturer in charge of the course	Dr Ágnes Szénási, Associate Professor
Course title	Advanced Entomology
Credits	8

Lecturer in charge of the course	Dr Péter Kóbor, Research Fellow
Course title	Vegetable Production
Credits	8
Lecturer in charge of the course	Dr Lajos Helyes, Professor
Course title	Viral Genetics and Virus Diagnostics
Credits	6
Lecturer in charge of the course	Dr Éva Várallyay, Research Advisor
Course title	Biotechnology of Cereals
Credits	6
Course coordinator	Dr János Pauk, Scientific Adviser
Course title	Horticultural Technologies
Credits	6
Lecturer in charge of the course	Dr Lajos Helyes, Professor
Course title	Plant Growth Models
Credits	6
Course coordinator	Dr Zoltán Berzsenyi, Professor
Course title	Current Issues in Horticulture
Credits	6
Lecturer in charge of the course	Dr Zoltán Pék, University Lecturer
Course title:	Theory and Practice of Resistance Breeding
Credits:	6
Course coordinator:	Dr Gyula Vida, Academic Adviser
Course title:	Biology and Ecology of Weeds
Credits:	6
Lecturer in charge of the course:	Dr Gabriella Kazinczi, University Lecturer
Course title:	Applied Soil Microbiology
Credits:	6
Lecturer in charge of the course:	Dr Gábor Csitári, Associate Professor

Course title:	Practical Application of Zoocides
Credits:	6
Lecturer in charge of the course:	Dr Sándor Keszthelyi, Professor
Course title:	Molecular Biology
Credits:	6
Lecturer in charge of the course:	Dr Anita Lepossa, Associate Professor
Course title:	Soil Water Management and the Environment
Credits:	6
Course coordinator:	Dr András Makó, Research Advisor
Course title:	Modern testing methods and estimation techniques for determining the physical and water management properties of soil
Credits:	6
Course coordinator:	Dr Kálmán Rajkai, Professor Emeritus
Course title:	International Soil Classification Systems
Credits:	6
Lecturer in charge of the course:	Dr Gergely Tóth, university lecturer
Course title:	New Developments in Crop Production
Credits:	6
Course coordinator:	Dr Gergő Péter Kovács, Associate Professor
Course title:	Applied Field Experimentation
Credits:	6
Course coordinator:	Dr Ákos Tarnawa, Associate Professor
Course title:	Research Workshop
Credits:	6
Course coordinator:	Dr Zoltán Kende, Associate Professor
Course title:	<i>In vitro</i> plant breeding
Credits:	6
Course coordinator:	Dr Anikó Veres, Associate Professor

Course title:	Genome editing and transgenic technologies in plant breeding
Credits:	6
Course coordinator:	Dr Antal Szóke, Associate Professor
Course title:	Physiological Basis for the Study of Environmental Effects
Credits:	6
Course coordinator:	Dr Kincső Decsi Szaszkóné, Associate Professor