HUNGARIAN UNIVERSITY OF
AGRICULTURE AND LIFE SCIENCES

DOCTORAL SCHOOL OF FOOD SCIENCE
OPERATIONAL REGULATIONS
and Annexes

2023

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1. The establishment, organization, and operation of the Doctoral School

1.1 The establishment of the Doctoral School (DS)

The Doctoral School of Food Science (hereinafter referred to as DSFS) received provisional accreditation ***in the field of Food Sciences*** (disciplinary area ***4.4*** of ***Agricultural Sciences***) at the plenary session of the Hungarian Accreditation Committee (HAC) on 15 December 2000. **The first full accreditation was granted at the session of the HAC on 22 February 2002.** (HAC decision no: 2002/2/III).

In its decision no. 2016/5/VII/4/2/960 (**dated 3 April 2016)**, the HAC determined that the DSFS meets the requirements for Doctoral Schools and **accredited it until 31 December 2019**. The justification for the accreditation highlighted that the publication minimum requirements of the DSFS are ambitious, and it is even more commendable that the majority of PhD students significantly exceed these requirements.

During the most recent review, the HAC determined that the DSFS meets the requirements for Doctoral Schools and **accredited it until 28 June 2024**. (See HAC decision no. 2019/6/IX/4/2/1300, dated 28 June 2019.)

1.2 The Organization and Operation of the DSFS

The Doctoral School operates within the organizational framework of **the Hungarian University of Agriculture and Life Sciences** and is the legal successor to the Doctoral Programme in Food Science and Food Engineering, accredited in 1994, as well as the Doctoral School of Food Science, which received provisional accreditation in 2000.

Name and Details of the Doctoral School

Name:	Doctoral School of Food Science
Short name:	DSFS
Headquartered:	In Budapest
Postal address:	1118 Budapest, Villányi Street 29–43.
P.O. Box	1518 Budapest, Pf.: 53.
Telephone number:	+ 36 1-305-7610
homepage:	https://uni-mate.hu/doctoral-schools
Operates within:	The Hungarian University of Agriculture and Life Sciences, Institute of Food Science and Technology

The data of the core members of the DSFS are included in **Annex 3**.
The **core members** of the Doctoral School are university lecturer or scientific researchers who comply with the labour law and meet the professional criteria outlined in the government decree.
The work of the Doctoral School is overseen and managed by the Head of the Doctoral School, with the assistance of the Scientific Coordinator.

1.3. The Head of the Doctoral School represents the Doctoral School and its Council, and also **makes decisions on**:

- the convocation of the Council of the Doctoral School,
- the appointment or revocation of the Scientific Coordinator,
- makes proposals for the core members and invited members of the DS, and
- the Head of the Doctoral School defines the operational procedures of the DS.

In accordance with the law, the Head of the Doctoral School must be a full-time core member university professor employed at the Institute of Food Science and Technology, holding a permanent staff position. The Head of the Doctoral School is elected from among the full-time professor core members of the Doctoral School, on the recommendation of the majority of the core members, by the University Doctoral and Habilitation Council (UDHC), and is appointed by the Rector for a five-year term (in accordance with the provisions outlined in paragraph 5 of the UDR). The appointment can be renewed several times.

The **head of the DS** can appoint a **Scientific Coordinator** to manage the administrative and organizational tasks of the school.

1.4. The Scientific Coordinator, based on the appointment and authorization of the head of the DS:

- represents the head of the DS and acts on matters delegated to them by the head,
- maintains contact with the school's doctoral students and candidates, university lecturer and supervisors, as well as with the Doctoral Office,
- coordinates the financial tasks related to doctoral training with the Institute and the University's central financial office,
- invites university lecturer to participate in the doctoral training,
- reviews the DS's quality assurance system, the research plans and progress of the doctoral students, in consultation with the supervisors,
- prepares the decision regarding
    - the doctoral students' disputed academic and exam matters,
    - the issuance of the pre-degree certificate (absolutorium),
    - in matters of exemptions,
    - in all matters entrusted to them by the Council of the Doctoral School or delegated by the Council of the DSFS within its own authority (e.g., the question of submitting for public disputation based on the preliminary disputation protocol)
    - provides opinions and makes recommendations on all matters presented to the Council of the Doctoral School,
- keeps minutes of the Doctoral School meetings.

1.5. The Food Science Doctoral School Programme aims to provide an opportunity for obtaining a doctoral (PhD) degree in disciplinary areas such as:

- the food chemistry and biochemistry of the food chain
- food safety, food quality assurance, quality characterization, and quality preservation;
- food technology and biotechnology
- food industry processes, measurement technology, and automation.

Food science and engineering research holds particular significance today, as food safety, food quality, and the application of modern methods and procedures in the food processing chain are becoming increasingly important. In this way, the various topics are of exceptional importance for the competitiveness of the domestic food economy and in the context of EU membership as well.

The Operational Regulations of the Doctoral School are based on Act CCIV of 2011 on National Higher Education (hereinafter referred to as Nftv.) and Government Decree 387/2012 (19 December) on doctoral schools, the procedure for obtaining a doctoral degree, and habilitation,

as well as the Doctoral Regulations (UDR, MATE-K/72-1/2021) and the Habilitation Regulations (UHR) of the Hungarian University of Agriculture and Life Sciences.

The work of the Doctoral Schoool of Food Science is divided into four thematic groups:

1.5.1. **Thematic group: The food chemistry and biochemistry of the food chain**

Persons in charge: Péter Fodor, DSc, and László Abrankó, PhD

Topics:

1. Physiological Role and Analysis of Bioinorganic Compounds
2. Quality Assurance in Food Analysis
3. Protein-Metal Interactions and Research on Metalloproteins
4. Separation Techniques, Optical and Mass Spectrometry Detection
5. Investigation of Biologically Active Food Components in the Food Chain.

1.5.2. Thematic groups: Food Safety, Food Quality Assurance, and Quality Preservation

Person in charge: Csilla Mohácsi Farkas, PhD

Topics:

1. Food safety
2. Physical Quality Characteristics (Optical, Texture, Thermal, and Dielectric Parameters)
3. Rapid Quality Control and Quality Assessment of Raw Materials and Foods in Food Processing
4. Food Microbiology
5. Food Preservation Effects, Mechanisms, and New Preservation Methods
6. Interactions of Food Preservation Factors and Their Prediction
7. Study of the Kinetics and Mechanism of Quality Changes, and their Mathematical Modelling
8. The Effects of Preservation, Packaging, and Storage on the Nutrition Biological and Sensory Value of Foods.

1.5.3. **Thematic group: Food Biotechnology and Food Technology**

Person in charge: Nguyen Duc Quang, PhD

Topics:

1. Application of Genetic Engineering Methods for the Improvement of Microorganisms
2. The Impact and Regulation of Environmental Parameters in Fermentation Systems
3. Fermented foods
4. Biotechnological Utilization of Food Industry By-products
5. Protein Engineering, Enzyme Active Site Modification, and the Study of Molecular Mechanisms
6. Production and Application of Immobilized Enzymes and Cells in Bioconversion Processes
7. Application of Bioanalytics in Process Control of Fermentation Systems
8. Biological Wastewater Treatment and Environmental Protection
9. Development of Fermentation and Winemaking Technologies
10. New Trends in Food Technologies

1.5.4. **Thematic group: Food Industry Processes, Measurement Technology, and Automation**

Persons in charge: Gyula Vatai, DSc, András Koris, PhD

Topics:

1. Study of Mass Transport in Gas-Liquid, Vapor-Liquid, and Liquid-Liquid Systems, Mathematical Modelling and Optimization
2. Research on the Application of Membrane Operations in the Food Industry and Environmental Protection
3. Gentle Production of Aroma- and Vitamin-Rich Products Using Membrane Technology
4. Application of Pervaporation and Membrane Distillation for Dehydration of Solvents and Solvent Removal from Industrial Wastewaters
5. Development of Closed, Cleaner Food Technologies Using Modern Separation Techniques
6. Mechanical and Rheological Properties of Foods
7. Measurement Techniques for Dielectric Properties of Foods and Their Evaluation
8. Determination of Moisture Content in Granular Materials
9. Quasi-static and Dynamic (acoustic, impact, ultrasonic, etc.) Measurement Methods for Determining the Quality Characteristics of Foods
10. Image Processing Techniques for Determining the Shape, Colour, and Surface Smoothness of Crops and Foods
11. Modelling and Control of Processes.

2. The organization and operation of the Council of the DSFS

The **Council of the Doctoral School of Food Science (Council of the DSFS) (Annex 4)** is a regularly meeting body that assists the head of the doctoral school in their work. It consists of the core members of the doctoral school, as well as invited members who hold a scientific degree and conduct research in the relevant field. These members are appointed and dismissed by the chair of the UDHC after consulting the opinion of the UDHC. At least one-third of the members are individuals who are not in an employment relationship with the University.

The current head of the doctoral school is also the chair of the Council of the DSFS. The chair of the Council of the DSFS shall arrange for replacement in case of absence or prevented from attending.

The head of the doctoral school may invite external experts to the ÉDIT meeting, who will attend the meetings in an advisory capacity. Doctoral students and pre-doctoral researchers studying at the Doctoral School may delegate one representative to the Council of the DSFS to represent their interests.

The representative of the doctoral students is a member of the Council of the DSFS with the right to make proposals.

The mandate of the head of the Council of the DSFS and its members is valid for the current accreditation cycle.

The Council of the DSFS meetings are convened by the head of the Doctoral School.

The Council of the DSFS has a quorum if more than 50% of its members are present at the meeting. All decisions of the Council of the DSFS are made by a simple majority vote, and in the event of a tie, the chair's vote decides.

2.1. Tasks and Authorities in the Operation of the Council of the DSFS

The Council of the Doctoral School of Food Science:
a) makes decisions on:
aa) the approval of doctoral students' research plans, the subjects, and their credit values,
ab) the issuance of the pre-degree certificate (absolutorium),
ac) the allocation of state funds allocated to the school (scholarship quotas and support),
ad) the selection of doctoral topic proposers, supervisors, and university lecturer of the doctoral school,
ae) the doctoral students' PhD degree topics,
af) the awarding of the emeritus title to core members,
b) makes recommendations on:
Ba) the composition of the admission committees,
bb) the appointment of a new supervisor or co-supervisor due to deficiencies in research progress or other reasons,
bc) the admission to the doctoral programme,
bd) the allocation of the state scholarship quota,
be) the acceptance of applications for PhD degree procedure,
bf) the composition of the comprehensive examination and evaluation committees based on the supervisor(s)' recommendation,
bg) the composition of the examination committee for the eight-semester programme,
bh) the awarding of the doctoral degree,
c) provides an opinion on:
ca) the periodic report of the doctoral student and the supervisor,
cb) habilitation requests,
cc) matters brought before the UDHC.

3. The registration and administration of the DS

3.1. The administration of the Doctoral School

3.1.1. The administration of DSFS is carried out by the DHC based on paragraph 6 of the UDR.

(1) All administrative and operational ~~clerical~~ tasks related to the doctoral programme are the responsibility of the Doctoral and Habilitation Center (DHC).
(2) The DHC is required to maintain a doctoral register for individuals who have been admitted to doctoral schools, are participating in the programme, have applied for a degree, and have obtained a doctoral degree. The DHC is required to provide data to the Higher Education Information System.
(3) The DHC shall maintain a register:
a) of students admitted to the doctoral programme,
b) of students participating in the doctoral programme (doctoral students),
c) of the subjects and courses offered by the doctoral schools in the given semester,
d) of the fulfilment of academic obligations and research work,
e) of the suspension of the student status,
f) of doctoral students who have passed or failed the complex exam,

g) of doctoral students who have obtained the pre-degree certificate (absolutorium),
h) of doctoral candidates,
i) of the PhD degree procedures,
j) PhD degree holders.

(4) The DHC shall make the doctoral dissertations, as well as the thesis booklet in Hungarian and a foreign-language, publicly available at least 2 weeks before the public disputation. Upon the request of the dissertation author, the UDHC will decide on the delay of the public disclosure for up to two years before the publication of the dissertation.
(5) The DHC shall provide data to the relevant authorities responsible for doctoral training and the conferment of degrees, in accordance with effective laws.
(6) The DHC manages the revenue from the training contribution, the tuition fee, and the fee for special procedures, and provides information about it to the UDHC.

3.2.1. The scientific coordinator of the Doctoral School is a doctor who assists the head of the Doctoral School in their work. They are primarily responsible for reviewing the training and research plans, credit certificates, the records within the scope of the competencies, and student administration of the DS.

The further administration of the DS is carried out by a designated staff member of the DHC, whose responsibilities include:

- keeping records of the doctoral training,
- ensuring the creation and continuous updating of the Doctoral School's local (institutional and university) and central (Doktori.hu) websites,
- preparing the materials for the comprehensive examinations, complex exams, and review committees for the Doctoral School meetings, in coordination with the chair of the DS,
- notifying and inviting the comprehensive examination and complex exam committees,
- organizing the public defence of doctoral theses, sending the printed or electronic version of the thesis and the dissertation to the designated reviewers and committees,
- ensuring the publication of the defended dissertations (university library and www.doktori.hu),
- keeping records and storing documents of the doctoral activities,
- publishes the announcements and calls of the Council of the Doctoral School.

4. The financial management of the DS

The location of the Food Science Doctoral School is the Buda Campus of the Hungarian University of Agriculture and Life Sciences (MATE).
The financial management system of the Doctoral School of Food Science is defined by Sections 7 and 8 of Chapter III, "Financial Conditions for Training and Degree Awarding," of the UDR.

5. The DS alumni policy

The goal of the Doctoral School includes maintaining continuous contact with young PhD degree holders who are early-stage researchers. After obtaining their degree, the Doctoral School surveys the placement and career progression of PhD graduates based on feedback received through annual mail inquiries. It continuously monitors the employment opportunities, challenges, and main reasons for career changes, as well as the competitiveness of food

engineering professionals with doctoral degrees in the labour market. In its communication efforts, the Doctoral School also aims to establish collaborative work and partnerships with new institutions and companies in the fields of education and research. This includes inviting alumni to actively participate in the Doctoral School's training programmes, and through these collaborations and the use of their experience, expanding and improving the employment opportunities for doctoral candidates.

6. The role of the DS in the admission procedure

6.1. The application to a Doctoral School; Specific requirements

Applicants for the Doctoral School must hold a university degree that matches the profile of the school. They possess independent professional ideas and the ability to act, having already demonstrated their suitability for doctoral training through previous activities (such as TDK research papers, teaching assistant work, publications, or other professional contributions, etc.).

The aim of the doctoral training at the Doctoral School of Food Science is to provide the best young graduates, who have completed their studies at universities and are clearly committed to science, with an opportunity to realize their professional ambitions and to offer professional assistance in launching their scientific careers.

The basic requirements for applying for organized doctoral training are specified in paragraph 10 (2) of the UDR.
The basic requirement for application and admission is the supporting recommendation of the chosen supervisor, in which they responsibly declare the candidate's suitability as well.

6.1.1. Those who can apply for the state-funded form of organized training are those:

- who hold a master's degree obtained from a domestic or foreign university, with at least a "good" rating, fulfilling the requirements of the DSFS, and a diploma confirming their qualification, or a degree equivalent to university-level education or qualification. Exemption from the "good" rating requirement may be granted for degrees obtained more than three years ago, based on verified scientific achievements.
- For admission to the DSFS, applicants are required to possess at least an intermediate level "B2" complex (type ’C’) state-recognized language certificate, or an equivalent certification, in one of the following foreign languages: English (preferably), German, Russian, French, Italian, or Spanish. In particularly justified individual cases, the Admission Committee of the respective Doctoral School may decide to accept additional languages.

  For non-native Hungarian-speaking students, intermediate proficiency in English is required.
- Prior scientific activity in accordance with the requirements of the DSFS (e.g., participation in a TDK conference or other professional conferences, publishing articles in scientific journals, filing patent applications, etc.) is considered an advantage during the admission procedure.
- Upon successful admission, candidates must declare their commitment to active, personal, and consistent participation in all aspects of the doctoral program, as well as the fulfilment of training requirements according to the curriculum.

6.1.2. For self-financed training, researchers and professionals working in research and development or other fields may apply under the conditions outlined in section 6.1.1, provided their employment and workplace conditions allow them to meet the requirements of the training and the attainment of the doctoral degree. An applicant can only be admitted to self-funded training if the above conditions are ensured at their workplace or another location, which the applicant must confirm in all cases with a written declaration.

6.1.3. The key conditions for participation in organized training are:

- admission statement from an accredited doctoral school and its supervisor,
- A supportive recommendation based on the interview by the admission committee.
- A favourable decision by the University Doctoral and Habilitation Council (hereinafter referred to as: UDHC) regarding the applicant's suitability for the program and admission.
- The verification of the availability of financial resources for the training and research.

6.1.4. In case of applicants who have prepared individually, at least 5 years of documented research activity is required as a basic requirement.

Candidates wishing to attain a doctoral degree through individual preparation can apply based on the provisions set out in sections 16 (4) and 17 of the UDR.
The student preparing individually can enrol in the Doctoral School only after successfully completing the complex exam, which serves as the entrance exam. To apply, candidates must present a minimum of 120 credits of completed work, based on the Credit Calculation Sheet for individual applicants provided in Annex 11.
The Council of the DS decides on the recognition of credits and may require the completion of additional credits if necessary. The conditions for attaining the degree are the same as those described in section 7.2 of the current regulations.

6.2. The admission procedure

6.2.1. Applications for participation in the doctoral program are submitted electronically. The applications must be sent to the email address *felveteli.phd@uni-mate.hu* exclusively in PDF format, as a single file, which should include all required attachments. The file name should be: short name of the doctoral school_work schedule_name (e.g., ETDI_scholar_Applicant_Katalin.pdf, or GSZDI_self-financed_Applicant_Janos.pdf).

The application form can be downloaded from the website of the Doctoral School of Food Science: https://uni-mate.hu/pályázat-doktori-képzésre-jelentkezéshez. The invoice request must be sent separately to the above-mentioned email address.

6.2.2. The application form is included in Annex 5 of the regulations, and the following must be attached:

a) for applicants to state-funded training programmes:
aa) academic curriculum vitae,
ab) a transcript of records or credit certificate and the university diploma,
ac) language proficiency certificate(s),
ad) a list of scientific activities, professional publications, and the training and research topic outline,
ae) the designation of financial resources for the research programmes, as well as the host institution's statement of acceptance,
af) proof of payment of the application fee,
ag) In cases where the applicant for state-funded training intends to carry out their research topic at an external research institution or their scholarship is funded not from state resources but from another source (foundation, institution, company, etc.), the application must also include a declaration of commitment regarding this arrangement.

b) For application to the self-financed doctoral programme, in addition to the documents listed in point a),
the applicant must also include a statement from either the applicant or their employer regarding the funding source for the doctoral research programme.

c) For application to the self-financed programme, the applicant must include a statement,
in the case of admission, the applicant must commit to paying the fee as specified in the regulations, or if another organization will cover the fee on their behalf, a statement from the organization must be included.

d) A foreign applicant who has completed their university studies in a language other than Hungarian or English,
must also attach an internationally recognized English language proficiency certificate, in accordance with the requirements set out in the regulations of the DS, to their application.

The DHC checks the submitted applications for formal correctness and, if necessary, requests the applicant to supplement the application by setting a deadline for submission.

6.2.3 The admission interview

(1) Applicants who have submitted a properly completed application, both in terms of form and content, will be invited to the admission interview. The admission interview is organized by the DHC, and the date is determined in consultation with the head of the DS, ensuring that it takes place by 30 June of the given year, or by 31 January in the case of a mid-year programme.
(2) The admission interviews are conducted by the DS admission committee. A minutes must be kept of the admission interview.
(3) The purpose of the admission interview is for the committee to gain an understanding of the candidate's personal and professional habit assessment, their ideas regarding doctoral work, their previous scientific activities, and their language proficiency. The committee

evaluates each candidate individually and then recommends or does not recommend their admission. The Admission Committee ranks the recommended applicants.
(4) During the admission interview, the Admission Committee evaluates the applicant based on the following criteria:

a) academic and professional qualities: (0 – 30 points) based on the evaluation of the Admission Committee.

b) scientific performance: (0 – 30 points) publications, research, conference presentations, posters, student scientific conference (TDK), etc.

c) the diploma grade (beyond the 'good' grade required for admission):

5 or 10 points, excellent with honours: 10 points, excellent: 5 points.

(5) In the case of a diploma older than three years, the diploma does not need to be scored, and a 'good' rating is not a requirement.
(6) For the recommendation for admission, at least 40 points must be achieved in the 1st and 2nd evaluation criteria as outlined in Section (4).
(7) The Admission Committee ranks the applicants who have achieved the required score and submits the ranking to the Council of the DSFS for approval.
(8) The scoring system for international applicants is regulated separately by the Council of the DSFS.

6.2.4 The admission decision

(1) Using the ranking of the Admission Committee, the DS prepares the ranking of applicants for state-funded and self-financed programmes and the head of the DS for submits it to the UDHC for approval. In case of oversubscription, the Council of the DSFS may offer applicants for the state-funded programme the option to enroll in the self-financed programmes well.
(2) Based on the recommendations, the UDHC makes the admission decision by 10 July, or by 31 January in the case of a mid-year programme, taking into account the quota and available capacity.
(3) The application will be rejected if it does not meet the admission requirements for the doctoral programme.
(4) The applicant will be notified of the decision no later than 31 July, or 10 February in the case of a mid-year programme.
(5) For the applicants who are admitted, the admission notice will include:

a) the form of training

b) the enrollment date and the list of required documents.

(6) If the applicant meets the admission requirements but was not admitted to the state-funded programme due to a lack of available spots, the self-financed programme option may be offered. In this case, if the applicant submits a declaration in accordance with paragraph 10 (3) (c) of the UDR (see section 6.2.2, point c), they will be admitted to the self-financed programme.

(7) An appeal may be filed against the rejection of the admission decision—if it violates any laws or university regulations—within 15 working days from the receipt of the decision.

The appeal must be submitted to the UDHC, addressed to the rector. The University Student Appeals Committee will make a decision on the matter within 30 days.

7. Specific requirements for PhD training

7.1. Rules on training

For those admitted as of 01 September 2016, the period of training is "eight semesters" [Act CCVI of 2015, § 15 (1)], consisting of two- or four-semester phases and a minimum of 240 credits must be obtained (Figure1). The first four semesters make up the "training and research" phase, the second is the "research and dissertation" phase.

In the eight-semester programme, doctoral students must obtain an average of 30 credits per semester. During the first four semesters - the training and research phase of the training - 120 credits must be accumulated, which is also a prerequisite for the complex examination.

At the end of the fourth semester, which also marks the end of the training and research phase and as a condition for starting the research and dissertation phase, a complex examination is required to measure and evaluate the progress of study and research. The doctoral candidate must submit a doctoral dissertation within three years of the complex examination. This deadline may be extended by a maximum of one year in the cases provided for in Article 45(2) of the Nftv. (Act on National Higher Education). In the case of a doctoral degree, the maximum period of suspension shall be two semesters.

In the second phase of the eight-semester training, candidates preparing for the degree individually may also be included, provided that they have fulfilled the requirements of the statutory provision [Article 23 (3) of Act CCVI of 2015] The doctoral student may take up a job, subject to the consent of the supervisor, department head and head of the doctoral school, provided that the training requirements are fulfilled continuously.

The doctoral student can earn credits in each semester through their study, research, publication and teaching activities, as follows:
The training and research phase

Study credits: min. 40 max. 60 credits
Research and publication credits: min.
40 max. 60 credits
Teaching credits: max 20 credits

The requirements for the research and dissertation phase are set out in Section 9.

7.2. Degree procedure

There is no need to apply for a degree in the eight-semester programme as the degree procedure starts with the successful completion of the complex examination and enrolment for the next semester.

Requirements to obtain the degree in the eight-semester programme are as follows.

a) passing the complex exam,
b) documenting their independent scientific work in accordance with
the DS's rules ofprocedure,
c) awarding a pre-degree certificate (absolutorium) by acquiring the 240 credits required,
d) fulfilling the language requirements,
e) independent solution of an academic problem, submission of a dissertation or a work of art,
f) defending the results in a public disputation.

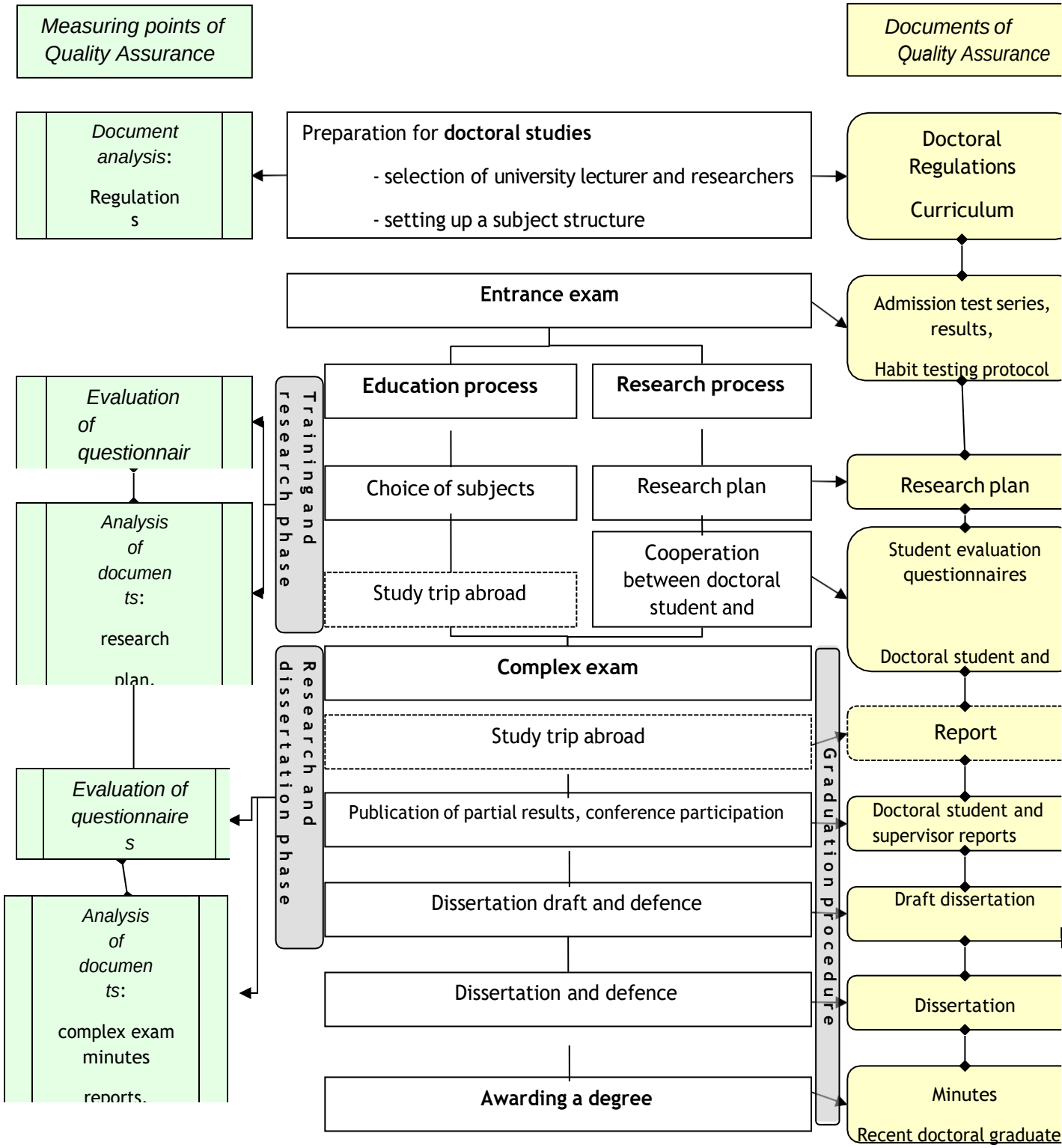

Figure 1 **Flowchart of the eight-semester doctoral programme**

8. The role of the doctoral school (DS) in the complex exam

(1) The complex examination shall be a summative, review examination of the knowledge of the doctoral student in the research field of the eight-semester programme.
The complex exam consists of two parts, in the following order:

a) Theoretical part: the candidate's theoretical knowledge is assessed in at least two subjects and/or topics, the list of which is set out in the doctoral school's study plan. The theoretical examination may include a written part.
b) Dissertation section: a report on the candidate's academic progress. The candidate gives a presentation of their knowledge of the literature, reports on the research results, outlines the research plan for the second stage of doctoral studies, and outlines the timetable for the preparation of the dissertation and the publication of the results.

(2) The complex examination shall be taken at the end of the fourth semester as a conclusion of the training and research phase.
(2a) The Head of the University Doctoral and Habilitation Council (UDHC) may, in cases requiring special consideration, authorise the complex examination to be taken in the next examination period with the consent of the supervisor and the head of the doctoral school.
(3) The complex examination must be taken in front of a complex examination board consisting of at least three members. The candidate's supervisor shall not be a member of the examination board but shall be invited to the complex examination.
(4) The complex examination board shall consist of a chairperson and at least two members. When constituting the examination board, the same number of alternates as members shall beappointed.
Composition:

a) chair/vice-chair: university professor, habilitated associate professor, habilitated college professor, or lecturer, researcher with the title of Doctor of the Hungarian Academy of Sciences, and Professor Emeritus of the University.
b) members/alternates: at least 2 senior lecturers and researchers with academic degrees in the research field relevant to the subjects of the examination, at least one of whom is not employed by the University,
c) secretary: a lecturer, researcher or doctoral student with expertise in the research area concerned and employed by the University. The Secretary has no voting rights.

(5) The supervisor must be given the opportunity to assess the candidate's work and preparation in writing beforehand and/or orally during the examination.
(6) A record of the complex examination, including a written assessment, shall be drawn up in accordance with Appendix 5(b) to the University's Doctoral Regulations (UDR). The examination board shall evaluate the theoretical and dissertation parts of the examination separately.
(8) The complex examination is graded in two levels: pass or fail.
(9) A complex examination is successful if more than half of the members of the board pass the candidate in both parts of the examination.
(10) The theoretical part of a failed complex examination may be repeated once more in the given examination period.
a) The dissertation part of the examination may not be repeated in the given examination period in case of failure.
(11) The result of the examination shall be announced on the day of the oral examination.

8.1. Conditions for applying for the complex examination

a) at least 120 credits in the training and research phase of doctoral studies.
b) an accepted impact factor/Q1-Q4 article on the topic of the doctoral dissertation or a manuscript submitted for publication (in this case, an application must be submitted)

9. Expectations at the research and dissertation stages

The doctoral student may obtain credits by carrying out study, research, publication and teaching tasks as described in point 7. The value of the research and dissertation credits that may be obtained is determined at the research and dissertation stages.

Research and publication credits: min.
100 creditsTeaching credits: max 20
credits

During the four semesters of the research and dissertation phase, the doctoral student conducts research, publishes and prepares a draft doctoral dissertation on the approved research topic for the preliminary disputation.

The doctoral dissertation is a piece of writing, composition or work prepared by the doctoral candidate or doctoral student, with which they demonstrate that they are capable of independently solving the scientific problem as one of the requirements of the degree [Act CCVI of 2015, § 37 (1) 1a]. When submitting the doctoral dissertation, the doctoral candidate or doctoral student shall declare in writing that they have not previously submitted their dissertation to another institutionand that it has not been rejected. The dissertation may not be co-authored.

The doctoral dissertation must include

- the problem statement and the aim of the research,
- justify the timeliness and relevance of the selected topic,
- review and critically evaluate the literature on the topic with cross-references,
- a description of the material and methodology of the study,
- the necessary illustrative material (diagrams, tables, etc.),
- the results of the research, a discussion of the results, highlighting the new scientific findings and the theoretical and practical conclusions that can be drawn from them, and recommendations for practical applications and further work on the subject (the novelty of the results must be demonstrated in accordance with the rules of the profession),
- a list of references, in alphabetical order, and, if necessary, the documents to justify the results.

The formal and content requirements for the dissertation are set out in **Annex 6 to the UDR.**
The doctoral dissertation - and its theses - are open to the public. Publication may be deferred until the date of publication of the patent or protection application at the latest. The higher education institution conferring the doctoral degree shall ensure that the doctoral dissertation and its theses are recorded in electronic or printed form and made public in full, by depositing one printed copy and one electronic copy of the doctoral dissertation and its theses in the central library of the higher education institution and by cataloguing them.

The doctoral dissertation and its theses booklets must be made available to the public in electronic form in the Repository of Hungarian Scientific Works, with a DOI in accordance with generally accepted international practice.

In the case of doctoral theses subject to patent or protection proceedings, the publication of the doctoral dissertation and the doctoral theses booklet may be postponed upon the request of the doctoral candidate, based on the supporting opinion of the evaluation committee and with the approval of the UDHC, until the date of registration of the patent or protection. Doctoral dissertations and their theses containing classified information for reasons of national security shall be published after the period of classification has expired.

In exceptional cases, a work may be submitted instead of a doctoral dissertation. This could be, for example, an accepted patent (invention), a machine that has been manufactured, or a production technology that has been introduced. The description of these must be prepared and submitted in

accordance with the provisions of Article 2 of the UDR. If authentic documents relating to the creation are available, a copy of these must be attached to the description. It must also be describedwhere and when the work has been put into practice. A thesis booklet in both English and Hungarian is also required.

In the case of exceptional merit, the dissertation may also be submitted in the form of a short thesis booklet (minimum 20 pages) if the candidate has at least 5 publications in Q1-ranked scientific journals onthe topic of the dissertation. In this case, a brief introduction should highlight the importance and originality of the work, its literature background, stating the objective(s), followed by a presentationof the results in extended thesis points with reference to the publications in the annex. The original work shall be annexed to the thesis booklet and will be assessed by the committee during the procedure. At least 3 of the 5 communications must be first authored.

10. Pre-defence descriptions/requirements

In the case of an eight-semester course, the doctoral student must submit their doctoral dissertation, together with the publications required by the doctoral schools, within three years of the complex examination at the latest, after obtaining the diploma and the preliminary disputation.

The pre-defence of the dissertation is organised by the candidate's supervisor. The secretary of the Draft Dissertation Evaluation Committee (DDEC) takes minutes of thepre-defence, which are signed by the members of the Committee. The statement of the Committee will be authenticatedby the signatures of the Chair and the Secretary of the pre-defence and sent to the Scientific Coordinator of the doctoral school. The declaration shall include

- **that the draft dissertation**
    a) is accepted without amendment,
    b) with the changes listed
    c) for the reasons set out above, it is not recommended for publicdefence.

The minutes of thedefence, including the attendance sheet, the opinions of the two opposing reviewers and the replies of the Candidate must be submitted to the DHC.

Exceptionally (e.g., in the case of a longer stay abroad), a waiver of the pre-defence may be granted with the approval of the Council of the Doctoral School of Food Science. In this case, two reviewers must give their comments beforehand, and the doctoral candidate or doctoral student must respond in writing to the comments,in which case the comments and the response may replace the minutes of the pre-defence.

11. Publication and other requirements for public defence

Before the dissertation is written, the candidate must provide evidence of independent scientific work as follows.

- publish the results of the dissertation or part of them in at least two publications in a peer-reviewed foreign language journal (with an Impact Factor and/or Q1-Q4 rating) with 51% authorship(one of which must be first author) or provide a certificate of acceptance for publication. In the case of a non-first authored article, articles with min. 51% authorship may be submitted. The authors must acknowledge theHungarian University of Agriculture and Life Sciences' Doctoral School of Food Science for the support in this study. Two main publications on the topic of the candidate's dissertation can only count in the conferment of one PhD degree (co-authors who are among the authors and are about to obtain a PhD degree may only include them as additional publications in their publication list).
- a minimum of 40 points must be accumulated according to **Annex 7.**

The specific professional requirements for the conferment of the degree are defined by the doctoral school as described in **Annex 1.** The publication requirements for doctoral (PhD) degrees shall be met on the basis of the points **described in Annex 7.**

Candidates must provide evidence of knowledge of two foreign languages necessary for the field of study. Proof of knowledge of two foreign languages may be furnished by presenting at least one intermediate level ('B2') complex language examination and a second language examination/language test at least elementary (B1) level or an equivalent language certificate (this may be a secondary or higher vocational qualification in a foreign language, a technical translator's qualification, other language examination, etc.). One of the language tests must be in English. In the case of eight-semester courses, proof of knowledge of both languages must be provided at the time of the publicdefence. The languages accepted by the Doctoral School of Food Science (DSFS) are English, German, Russian, French, Spanish, Italian (other languages may be accepted by DSFS for duly justified professional reasons).

The doctoral dissertation shall be defended in a public defence before an evaluation committee established in accordance with Section 25 (3) of the UDR. The doctoral dissertation may be defended in Hungarian by native Hungarian-speaking doctoral candidates or doctoral students, but upon the request of the supervisor, the defence may also be conducted in a foreign language with the permission of the UDHC. If the dissertation is written in a foreign language and the defence is also in a foreign language, the evaluation must also be written in the foreign language. The applicant'**s supervisor must cover** the administrative costs and the costs of conducting the PhD defence in a foreign language.

Within 2 months of the request, the two official reviewers of the committee will prepare a written evaluation of the dissertation and the theses, including a statement on whether they recommend that the dissertation be submitted for public disputation.

The assessment must include at least the following:

a) In the general part of the assessment (with the reasons), the following should be mentioned:
- the dissertation meets the formal requirements,
- the relevance and timeliness of the topic,
- literature reviewed on the topic and its evaluation and use in the development of the topic,
- the objectives, methods and results of the research are consistent,
- new results of independent research,
- whether the dissertation as a whole meets the conditions for public disputation.

b) In the detailed part of the assessment, the deficiencies and errors noted should be described, indicating the page and paragraph - and, if necessary, the line.

The proposed structure and main criteria for the evaluation of the dissertation are set out in the guidelines (**Annex 6 of the UDR**).

The date of the public defence of the dissertation shall be negotiated by the supervisor of the applicant, doctoral candidate or PhD student of the doctoral student, taking into account that it must fall at least two weeks after publication. The date shall be set in such a way that the defence is notified to the internal and national public of the University at least two weeks prior to the date of thedefence, which shall be arranged by the DHC and the supervisor.At the request of the doctoral candidate or the doctoral student, a closed defence may be held on the basis of the supporting opinion of the evaluation committee and with the approval of the council of the DSFS if the doctoral dissertation is concerned with patent proceedings or contains classified data for reasons of national security.

A record of the doctoral defence is drawn up, containing the main findings of the examination(**Annex 5c of the UDR**). This record is public.

The dissertation can be submitted for public defence only if the two official reviewers recommend it. If the recommendation of one of the reviewers is negative, a third official reviewer - proposed by the UDHC - must be invited. In the case of two negative reviews, a new dissertation can only be submitted after one year.

In the case of two supporting reviews, the dissertation must be submitted for public defence within two academic months of receipt of the reviews. The candidate will receive the reviews in advance and will respond to them in writing at least one month before the defence.

The disputation is chaired by the chairman of the committee. If there is an official reviewer who has rejected the dissertation, he or she must also be invited to thedefence. In the publicdefence, the secretary shall present the doctoral candidate's academic curriculum vitae, followed by an oral presentation of the dissertation by the doctoral candidate. This will be followedby a presentation of the opinions of the official reviewers. The doctoral candidate then responds orally to questions and comments from the official reviewers in writing or from the committee members, the official reviewers and the audience.

After the disputation, the committee evaluates the dissertation and the presentation of the, doctoral candidate on a scale of 1-5 in a closed session, by secret ballot. The average points shall becalculated as a simple average of the points. The result of the disputation shall be determined on the basis of the average points as follows [University Doctoral Regulations § 25 (11)]:

a) summa cum laude: 4,51 - 5,00
b) cum laude: 3,71 - 4,50
c) ríte: 3,17 - 3,70
d) irríte: up to 3,16

The Chair shall announce the result publicly after the vote and give the reasons for it.

The qualification of the doctoral degree in the eight-semester course is the same as the qualification according to paragraph 25 (11) of the UDR.

The DHC, after conferring the degree, will provide 1 hard copy of the doctoral dissertation to the library of the relevant campus, 1 additional hard copy to the library of the department/institute of the supervisor for deposit, and upload the electronic version of the dissertation and its theses to the website of the National Doctoral Council.

12. Publication and other requirements for habilitation

The requirements for the initiation of the habilitation procedure and the habilitation theses are set out in the University Habilitation Regulations. According to the University Habilitation Regulations, the Scientific Coordinator of the doctoral school is responsible for reviewing habilitation applications and conducting a habilitation examination of the applicant. On the basis of a proposal from the Habilitation Committee of the doctoral school, the DS Council gives its opinion on the academic and teaching activities of the applicant for habilitation. The written opinion and the proposal to the Committee of Experts aresent by the Scientific Coordinator of the doctoral school to the Chair of the Habilitation Committee by 1 February or 1 September of the year in question. The DS shall also attach the written opinion sent to it by the Institute.

The habit assessment is based on the requirements for the award of a degree set out in these Regulations, supplemented by the requirements set out in the table below (**Postgraduate Education**) and in paragraph 12.1 and the points system set out here.

The DS organises the steps of the habilitation procedure in accordance with Articles 6-9 of the UHR. The administrative tasks are carried out by the Secretary of the Habilitation Committee andthe doctoral secretariat responsible for the field. The head of the DS and its professors are invited to the lectures ex officio.

In the habit assessment, the following criteria are additional to the graduation requirements of this regulation.

Postgraduate education **Education of young scientists**		Number	Weight-factor	Point
1. Doctoral (PhD)	head of school		5	
	head of thematic group		4	
2. PhD supervisor	obtained a degree		2	
	ongoing		1	
3. Consultancy work (thesis, dissertation, TDK research paper)	submitted papers		0.5	
	of these awarded		1	

12.1. Independent academic work required for habilitation

An application for habilitation may be submitted if the candidate (regardless of their academic degree) fulfils the publication requirements of **Annex 7** and their scientific activity exceeds 190 points, taking into account the minimum requirements of **Annex 2.**

* The 6 IF journal articles and/or Q1-Q4 rated articles must have been published since the PhD degree - or independently of the theses

Language of habilitation presentation and disputation

- classroom lecture: Hungarian
- technical/scientific presentation and disputation: English

Note: In professionally justified cases, the doctoral school's council may authorise other recognisedworld languages. One of the required language examinations must be in English.

Composition of the Habilitation Committee: see (**Annex 4)**

13. DS's quality assurance system

The University may award a doctorate (PhD) as the highest academic degree. This degree attests to a high level of knowledge of a particular discipline, the pursuit of new knowledge and the abilityto carry out independent research. The University is a basic training centre for scientific researchers, where training is organised in doctoral schools. The quality management system of doctoral training must be based on principles and methods which, in accordance with the Higher Education Act and the requirements of the Hungarian Accreditation Commission, guarantee that the scientific performance of doctoral candidates reaches the level of those who have obtained a degree in leading international workshops in their field.

To this end, the following principles should be applied in the operation of the quality managementsystem.

The principle of benchmarking. It means that throughout the quality management process, we continuously monitor the doctoral training and the academic performance of doctoral students in leading foreign and domestic workshops of similar profile.

The principle of publicity. We strive to provide a wide range of information to the professional and scientific public at every step of the quality management system.

The principle of feedback. By developing and operating a quality management system, we aim toprovide continuous feedback on the quality of the activities of the teachers, supervisors and members of the doctoral school councils involved in doctoral training.

The principle of professional control. The control of international and national professional opinion should be enforced throughout doctoral training.

The principle of quality focus. Through the development and operation of the quality management system, we aim to ensure that the expectations of both our students and teachers are constantly raised,

while at the same time humility towards science becomes an integral part of their values, and initiative and creativity as one of the pillars of their thinking.

The principle of protection of intellectual property. The development of the quality management system should also contribute to ensuring that university doctoral education will continue to be fully in line with the European Union's and the Republic of Hungary's efforts to protect intellectual property.

The principle of taking account of scientific ethical requirements. In the development and operation of the quality management system, the positions of the Scientific Ethics Committee of the Hungarian Academy of Sciences shall be widely applied.

The principle of individual responsibility. The development and running of a science school is a team effort, but it can only be successful if it is clear who has what roles and responsibilities in the training and research process.

The principle of documenting processes. All decision points related to doctoral training should be documented. Their control is a fundamental task of the quality management system. Within thedoctoral training as a whole, an important objective is to avoid increasing the administrative burden on the university lecturers involved in the development and operation of the quality management system.

The principle of efficiency. The objective of concentrating the resources available to the universityis to ensure that students are able to study in the best-equipped research facilities, under the guidance of the most qualified teachers in the subject. Cost-effectiveness should also be a priorityin doctoral training. This includes continuous monitoring of costs and analysis of the cost/benefit ratio.

The principle of practical applicability. In evaluating doctoral schools, we take into account the extent to which the choice of topics and the results of the research help to formulate answers to socio-economic questions.

The elements of a quality management system in the doctoral education and trainingprocess include

- advertising the training,
- selecting university lecturers and supervisors,
- preparing for the entrance exam,
- administering the entrance examination, assessing applicants for a degree by individual preparation,
- designing the training structure,
- developing subject themes and the organisation of examinations,
- guiding the choice of subjects for PhD students,
- monitoring the academic progress of PhD students, establishing and operating afiling system,
- student evaluation of education,
- the relationship between the PhD candidate/doctoral student and the supervisor,
- the relationship between the PhD candidate/doctoral student and the host department (research centre),
- studying abroad,
- regular reporting of doctoral students and doctoral candidates,
- reporting by the research supervisor,
- preparing and conducting the complex exam,
- submission and defence of the draft dissertation (pre-defence),
- submission and defence of the dissertation,
- evaluating the publication record of doctoral candidates,
- conferring the PhD title,
- creating the infrastructure conditions,
- gauging the views of degree holders,

- registration and post-graduation contact of degree holders.

In addition to the principles set out in the University Doctoral Regulations, the following quality assurance factors are applied in the Doctoral School of Food Science.

Subject evaluation form: completed by all students at the end of each semester for the subjects studied in the NEPTUN system. Its purpose is to evaluate and improve the adequacy of the subject structure.
Supervisor's report (Annex 12): issued by the supervisor for each student during the complex examination. Its purpose is to evaluate and document the student's progress and research work, andto ensure goal-oriented progress.

14. Additional provisions

These Regulations will be submitted to the UDHC for adoption following a decision by the Council of the Doctoral School. It shall enter into force on the date of its adoption.

On a transitional basis, for doctoral candidates and pre-doctoral candidates whose procedure has already started before entering into force of these regulations, the current or previous rules and requirements shall apply, whichever are more favourable to the doctoral candidate concerned.

Dr Livia Simon Sarkadi, DSc
Doctor of the Hungarian Academy of Sciences, Professor
Head of the Doctoral School

ANNEXES

Rules of Procedure of the Doctoral School of Food Science

Annex 1.

Publication requirements for the public defence of the dissertation

1. Publications and their impacts	
1.1. Publications in journals	**min. 20**
1.2 Publication in conference proceedings	
1.3 Book, university coursebook	-
1.4 Citations	-
2. Profession-specific scientific works	-
3. External research sources	-
4. Education of young scientists	-
5. Other scientific activities	-
1.-5. Total	**min. 40**

Note: This table, in the above order and including the candidate's own points, should be placed at the end of the list of the candidate's publications, with individual articles scored separately and appropriately in the right column of the table.

Annex 2

Publication requirements for habilitation

1. Publication and their impacts	
1.1. Publications in journals *	min. 6x10 points
1.2. Citations to all publications in the candidate's lifetime	min.100 citations
1. Total	**min. 160 points**
2. Profession-specific scientific works	-
3. External research sources	-
4. Training young scientists	-
5. Other scientific activities	-
2.-5. Total	**min. 30 points**
1.-5. Total	**min. 190 points**

*** After obtaining the PhD**

Other documents not specified in the Doctoral Regulations of the University, but used in the Doctoral School

Rules of Procedure of the Doctoral School of Food Science

Annex 3

THE CORE MEMBERS OF THE DOCTORAL SCHOOL OF FOOD SCIENCE AND THEIR MAIN DATA

name	academic degree	discipline of academic degree	type of university employment	habilitation details	academic title	active supervisor
Core Members						
László Abrankó	PhD	food science	full-time	BCE, 2011	full professor	yes
Gabriella Kiskó	PhD	chemical science	full-time	SZIE, 2011	full professor	yes
Zoltán Kovács	PhD	food science	full-time	SZIE, 2018	full professor	yes
Zoltán Kókai	PhD	food science	full-time	MATE, 2021	associate professor	yes
Csilla Mohácsi Farkas	PhD	chemical science	full-time	BCE, 2010	full professor	yes
Nguyen Duc Quang	PhD	food science	full-time	BCE, 2011	full professor	yes
Livia Simon Sarkadi	DSc	chemical science	full-time	BME, 1999	full professor	yes
László Sipos	PhD	economic and business administration sciences	full-time		associate professor	yes
Éva Stefanovits Bányai	DSc	agricultural sciences	full-time	BCE, 2002	Prof. Em	yes
Core Members, emeriti						
Erika BékássyMolnár	DSc	chemical science	Prof. Em			
Péter Ákos Biacs	DSc	chemical science	Prof. Em			
Péter Fodor	DSc	chemical science	Prof. Em			
Ágoston Hoschke	CSc	chemical science	Prof. Em			
Judit Kosáry	DSc	chemical science	Prof. Em			
Anna Maráz	CSc	chemical science	Prof. Em			
Gyula Vatai	DSc	chemical sciences	Prof. Em			

Annex 4.

MEMBERS OF THE COUNCIL OF THE DOCTORAL SCHOOL OF FOOD SCIENCE (CDSFS), ADMISSION AND HABILITATION COMMITTEES

Members of the Council of DSFS (CDSFS),

Chair:	Lívia Simon Sarkadi	full professor DSc
Internal members:	László Baranyai	full professor PhD
	Csilla MohácsiFarkas	full professor PhD
	Nguyen Duc Quang	full professor PhD
	Éva Stefanovitsné Bányai	full professor DSc
	Gyula Vatai	full professor DSc
External members:	László Varga	full professor DSc
	Béla Róbert Kovács	full professor PhD
	András Salgó	full professor DSc

Scientific coordinator: Gabriella Kiskó full professor PhD
The Head of the Institute is a permanent member, in a consultative capacity
The representative of PhD-students is a permanent member, in a consultative capacity

Admission Committee of DSFS

The head of the Doctoral School of Food Science appoints an admission committee of 5 members from among the core members and council members, which is approved by the Chair of the UDHC.

Habilitation Committee of DSFS

Chair:	Csilla Mohácsi Farkas	full professor PhD
Members:	Gyula Vatai	full professor DSc
	Lívia Simon Sarkadi	full professor DSc
	Éva Stefanovits Bányai	full professor DSc
	Nguyen Duc Quang	full professor PhD

Annex 5.

Application form
for doctoral studies

file number:

HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES

Name (name at birth)		Citizenship	
Place of birth	Town		Country
Date of birth	……year……month……day	Mother's name	
NEPTUN- code (if any)			
Address			
Postal address			
Telephone		E-mail	
Place of work		Position	
Work address			
Telephone		E-mail	
Name of the doctoral school to which you applied			
Doctoral topic for which you applied			
Name of supervisor		Signature of supervisor	
Type of training *	Scholarship holder student	Self-financed student	
* Underline the appropriate answer!			
Professional qualification	Programme		Specialisation
Diploma issued by		Qualification of diploma	
Date when the diploma was obtained or is expected to be obtained		Number of diploma	

Language proficiency	Level	Type	Number of language certificate
Scientific activities (number)			
Study trip abroad:	Presentation:	Scientific article:	Scientific Student Conference research paper:

Miscellaneous:		
Have you previously or currently submitted an application for a doctoral programme?	yes	no
If yes, when: where:		
Date: signature of the applicant		

Attachments	
1. CV	
2. transcript of records or credit certificate	
3. copy of university diploma	
4. language certificate(s)	
5. scientific activities, list of scientific publications	
6. research work plan **	
7. financial resources for the research programme	
8. a letter of acceptance from the research centre	
9. proof of payment of the procedural fee, request for invoice	
In addition to the above, applicants for self-financed programmes must attach:	
A declaration from the applicant or his/her supervisor at work on the funding of the doctoral programme and the research must be attached.	
A declaration that the applicant undertakes to pay the tuition fees if admitted to the doctoral programme or, if the tuition fees of the applicant are paid by an organisation, a declaration from the paying organisation must be attached.	

** Research work plan template

RESEARCH PLAN

Doctoral School:
Head of Doctoral School:
Supervisor:
Name of applicant:
Title of the research topic:

1. Scientific background

1.1 Timeliness and significance of the research topic
1.2 Literature review and justification of the research

2. Objectives

2.1
2.2

3. Methods

3.1
3.2
3.3

4. Expected results

4.1
4.2

When drawing up the research work plan, please consider the following:
The work plan should be a minimum of 5 and a maximum of 7 pages (11 point font size, 1/single point line spacing), the content and the quality of the work plan should allow the relevant doctoral school to assess the feasibility of the research and its steps, the chosen methods of the investigation, the methods of the evaluation of the results, and the expected results.
Control points should include specific, accountable research steps and tasks aimed at completing the dissertation.
Individual chapters can be further divided into paragraphs, but the (decimal) numbering of paragraphs is not recommended.
Date
…….
Applicant
…….
Supervisor (can be submitted without the signature of the supervisor)

Curriculum (training plan)

Study and research stages

Study unit	**Activity within the study unit**	**1.sem.** (autumn)	**2.sem.** (spring)	**3.sem.** (autumn)	**4.sem.** (spring)	**Total**
I. Study credits	Dr. Attila Hegedűs - Principles of food research	4				4
	Dr. Péter Fodor - Modern analytical techniques and methods	4				4
	Dr. József Felföldi, Dr. László Baranyai, Dr. Zoltán Kovács (Department of Food Processing Operations and Machinery)-Process measurements and optimization		4			4
	Dr. András Salgó - Nutrition biochemistry *			4		4
	Lívia Simon Dr. Sarkadi- Selected topics in nutrition science *				4	4
	Dr. Nguyen Duc Quang – Food biotechnology				4	4
	Dr. Péter Biacs /László Friedrich - Product development in the food industry				4	4
min 40, max 60	Recommended subject	4	4	4		12
	Recommended subject		4	4		8
						48
II. Research and publication credits	International conferences ▽ (5 credits/abstract)					5
min 40, max 60	Independent research	10	10	10	10	40
	Article IF/Q Article IF/Q ▽ (15 credits/article)					15
						60
III. Teaching credits ♠	Classroom practice (weekly) (4 credits/ semester)					4
max 20	Laboratory practice (weekly) (4 credits / semester)					4
	Work placement (1 day) (1 credit / semester)					1
	Thesis supervision (3 credits / semester)					3
						12
Total		**30**	**30**	**30**	**30**	**120**

Research and dissertation stage

Study unit	**Activity within the study unit**	**5.sem.**	**6.sem.**	**7.sem.**	**8.sem.**	**Total**
II. Research and publication credits min 80	Research and publications (International conference + Article IF/Q)	25	25	15	15	80
PhD dissertation drafting [0]				8	12	20
III. Teaching credits ♠	Classroom practice (weekly) (4 credits/					4
max 20	Laboratory practice (weekly) (4 credits / semester)					4
	Thesis supervision (12 credits / semester)					12
Total		**30**	**30**	**30**	**30**	**120**

* You can choose one of the two subjects

▽ In any semester

♠ It is optional, but you must achieve the total number of credits required.

[0] Supervisor certifies that it has been completed

Annex 7.

POINTS FOR PUBLICATIONS AND ACHIEVEMENTS

(the following table should be used only for the calculation of the points, it should not be copied into the publication list)

1. Publications and their impacts		Number	Weight-factor	Points
1.1. Journal articles	IF or Q1-Q4 journal article in a foreign language		10	
	IF or Q1-Q4 journal article in Hungarian		6	
	NOT an IF journal article, in a foreign language		4	
	NOT an IF journal article, in Hungarian		2	
1.2. Book, book chapter	A book, a university coursebook, a book chapter in a foreign language (per sheet (commenced))	10/sheet (max. 50 per a book)		
	A book, a university coursebook, a book chapter in Hungarian (per sheet (commenced))	6/iv (max. 30 per book)		
	Book editing, in a foreign language		10	
	Book editing, in Hungarian		5	
1.3. Conference proceedings	In Hungarian (full)		3	
	In Hungarian (abstract)		1	
	International conference (full)		5	
	International conference (abstract)		2	
1.4. Citations	(without self-citations)		1	
1.5. Electronic publications	Book editing, domestic		5	
	Published in a foreign language, peer reviewed		2	

2. Profession-specific achievements:		Number	Weight-factor	Points
2.1. Patents	Patents (domestic)		6	
	Patents (international)		10	
2.2. Documented and implemented: - technological development - technical plan			5	
2.3. Software development			8	
2.4. Professional recognition, professional awards and prizes	International scientific or professional award		5	
	Award given by HAS or a public body		5	
	Award given by a domestic scientific society, chamber or professional organisation		3	
	Award given by a domestic foundation or professional association		3	
	1st Prize or Grand Prize received at the National Scientific Student Conference		3	
	1st, 2nd prize received at the National Scientific Student Conference, 1st, 2nd, 3rd prize received at the National Scientific Student Conference of the Faculty of Agriculture, Food Science and Environmental Management and the Hungarian Food Science and Technology Association (MÉTE), or 1st prize received at the University Scientific Student Conference.		2	
	Other awards for university students		1	

3. R+D projects	Number	Weight-factor	Points
3.1. Head of wining domestic scientific and R+D projects and research assignments		3	
3.2. Participant (not head) in wining domestic scientific and R+D projects and research assignments		1	

3.3. Head of wining foreign or international scientific and R+D projects and research assignments		10	
3.4. Participant (not head) in wining foreign or international scientific and R+D projects and research assignments		3	

4. Education of young scientists		Number	Weight-factor	Points
4.1. Doctoral (PhD, DLA)	head of school		5	
	head of thematic group		4	
4.2. PhD or DLA supervisor	degree holder		2	
	ongoing		1	
4.3. Supervisor (of a BSc/MSc thesis, a Student Scientific Conference research paper)	submitted theses/ research papers		0,5	
	award-winning		1	

5. Other professional/scientific activities		Number	Weight-factor	Points
5.1. Academic Committee or national professional committee	functionary		10	
	member		2	
5.2. Editorial board of a national journal	member		5	
5.3. Editorial board of a foreign journal	member		10	
5.4. Organising committee of a congress or conference	functionary		5	
	member		2	
5.5. A national scientific society	functionary		2	
5.6. An international scientific society	functionary		5	
5.7. Review of PhD dissertation	reviewer		2	
5.8. Review of HAS doctoral dissertation	reviewer		5	
5.9. International expert assignment	expert		2	

Note: the number multiplied by the weight factor gives the point

The points awarded to doctoral students and doctoral candidates for authorship and editing are calculated and allocated on the basis of the authors' declaration.
Only those publications are considered scientific publications (whether in a traditional or electronic form) which are peer reviewed by an organisation with an editorial board and which is founded to publish and document original scientific results.
Only those journals can be considered scientific or professional journals which have an ISBN or ISSN number and an editorial board.

Annex 8.

THEORETICAL SUBJECTS OF THE COMPLEX EXAMINATION

1. FOOD CHEMISTRY
2. FOOD ANALYTICS
3. NUTRITION SCIENCE
4. FOOD MICROBIOLOGY
5. FOOD BIOTECHNOLOGY
6. MICROBIOLOGICAL METHODS
7. ENZYMOLOGY
8. MOLECULAR BIOLOGY AND GENETICS
9. FOOD PROCESS ENGINEERING
10. FOOD PROCESS CONTROL
11. FOOD PHYSICS
12. PRESERVATION PROCESSES
13. FERMENTATION PROCESSES
14. CEREAL AND INDUSTRIAL PLANT PROCESSING
15. LIVESTOCK BASED RAW MATERIAL PROCESSING
16. FOOD INDUSTRY QUALITY CONTROL
17. FOOD STORAGE AND PACKAGING
18. BIOMETRY
19. ENVIRONMENTAL PROTECTION IN THE FOOD INDUSTRY
20. FOOD QUALITY AND SAFETY

Annex 9.

I. FEES PAYABLE BY STUDENTS PARTICIPATING IN THE PhD-PROGRAMME
(valid for new PhD-students admitted to the programme from September 2016)

For more information about current fees visit the university website (Attachment 11)
https://uni-mate.hu/doktori-képzés

REDUCTIONS:

Students who receive a state scholarship under Section 125 (1a) of the Act on Higher Education (Nft.) do not pay tuition fee, but are not exempt from other fees.

All **other** reductions requested on the basis of **perceived fairness** shall be subject to the opinion of the CDSFS.

Annex 10.

CREDIT REGULATIONS

Key principles of the legislation on credits

- 30 student study hours are worth 1 credit.
- The value of the credit shall not depend on the degree of compliance, but shall be calculated solely on the basis of the time spent on the work.
- The acquisition of study credits should be concentrated in the first two years of the programme.
- Doctoral students must earn an average of 30 credits per semester. During the first four semesters - in the training and research stage of the programme - 120 credits must be obtained, which is also a prerequisite for the complex examination.
- In a full-time programme, a specified minimum number of credits must be obtained through study contact hours. The total number of study hours (including preparation hours) taken into account for the calculation of credits may not exceed three times the number of contact hours.
- If a student fails to earn at least 20 credits per semester without justification and for reasons attributable to him/her, he/she shall be excluded from further studies.

Study units of credit value in the DSFS training programme

During the organised doctoral programme, students earn credits through the activities (study units) listed below.

Study unit I: Study credits
The credit value of contact hours (lectures, seminars) is earned through self-study and examination. Preparation time for contact hours is also taken into consideration, up to a maximum of three times the number of contact hours. Students can choose subjects from the doctoral schools' annually updated list of subjects published until 1 September, or from the subjects of any doctoral programmes accredited in Hungary, in agreement with the head of the doctoral school. The recognition of other subjects offered in the bachelor's degree programme as doctoral credits is regulated by the Doctoral School's rules of procedure. Completion of the subject is assessed with a grade.

Number of Credits: a reference number which depends on the number of lessons per week

To be certified by: the course coordinator

Study unit II: Research and publication credits
Credits shall be earned for independent research carried out under the guidance of the supervisor and used in/for the dissertation (laboratory and field experiments, related literature review and regular publication of the results). The study unit is assessed by a final grade at the end of the semester.

Number of Credits: a reference number which depends on the number of lessons per week
To be certified by: the supervisor

Study unit III: Teaching credits
Regularly supervised independent teaching under the guidance of the supervisor or the head of department (e.g. classroom teaching or managing work placement, thesis consultation)

Number of Credits: for contact hour activities, the same evaluation can be used as indicated for Study unit I; 1 credit can be awarded for thesis supervision in the semester of the graduation of the supervised student; 2 credits can be given for a winning research paper at Students Scientific Conference. Independent

activities not connected to contact lessons, such as work placement in an external organisation, field practice, preparation of plans, study trip in the country and abroad, analytical practice and practice with instruments and equipment in a laboratory, etc. may also be accepted.

Number of credits: Depending on the number of working hours achieved (the credit point for study trips longer than 2 weeks is determined individually by the Doctoral School, on the basis of the proposal of the supervisor).
To be certified by: the supervisor

According to the NFtv., the department or the supervisor is authorised and responsible for the determination and payment of the fees of tuition (teaching).

Credit values for publication activities:

Types of publication	**Credit**
IF journal article in a foreign language	**15**
NOT an IF journal article in a foreign language	**3**
NOT an IF journal article in Hungarian	**1**
International conference (full paper)	**7**
Conference in Hungarian (full paper)	**4**
Abstract in a foreign language	**3**
Abstract in Hungarian	**1**
Other publication in a foreign language	**3**
Other publication in Hungarian	**1**
Book, university coursebook in a foreign language	**20**
Book chapter in a foreign language	**15**
Book, university coursebook in Hungarian	**12**
Book chapter in Hungarian	**10**
Book editing, international	**15**
Book editing, domestic	**7**
Patents (in Hungary)	**15**
Patents (abroad)	**20**
Patents (international)	**20**

Annex 11.

CALCULATION OF CREDITS FOR PUBLICATIONS AND ACHIEVEMENTS AND FOR PROFESSIONAL PERFORMANCE FOR THE COMPLEX EXAMINATION OF INDIVIDUALLY PREPARED CANDIDATES:

(the following table should be used to calculate the credits, it should not be copied into the publication list)

1. Publications and their impacts		Number	Credits	Points
1.1. Journal article	IF journal article in a foreign language		15	
	NOT IF journal article in a foreign language		6	
	NOT IF journal article in Hungarian		4	
1.2. Book, book chapter	A book, university coursebook, book chapter in a foreign language (per sheet (commenced))	15/sheet (max. 50 per book)		
	A book, university coursebook, book chapter in Hungarian (per sheet (commenced))	10/sheet (max. 30 per book)		
	Book editing in a foreign language		15	
	Book editing, in Hungarian		7	
1.3. Conference proceedings	In Hungarian (full)		4	
	In Hungarian (abstract)		2	
	International conference (full)		7	
	International conference (abstract)		3	
1.4. Citations	(without self-citations)		1	
1.5. Electronic publications	Published in Hungarian, peer-reviewed		1	
	Published in a foreign language, peer-reviewed		3	

2. Profession-specific achievements		Number	Credits	Points
2.1. Patents	Patent (domestic)		15	
	Patents (foreign)		20	
2.2. Documented and implemented:: - technological development - technical plan			5	
2.3. Software development			8	
2.4. Professional recognition, professional awards and prizes	International scientific or professional award		5	
	Award given by HAS or a public body		5	
	Award given by a domestic scientific society, chamber or professional organisation		3	
	Award given by a domestic foundation or professional association		3	
	1st Prize or Grand Prize received at the National Scientific Student Conference		3	
	1st, 2nd prize received at the National Scientific Student Conference, 1st, 2nd, 3rd prize received at the National Scientific Student Conference of the Faculty of Agriculture, Food Science and Environmental Management and the Hungarian Food Science and Technology Association (MÉTE), or 1st prize received at the University Scientific Student Conference.		2	
	Other awards for university students		1	

3. R+D projects	Number	Credits	Points
3.1. Head of winning domestic scientific and R+D projects and research assignments		5	
3.2. Participant (not head) in winning domestic scientific and R+D projects and research assignments		3	
3.3. Head of winning foreign or international scientific and R+D projects and research assignments		10	
3.4. Participant (not head) in winning foreign or international scientific R+D projects and research assignments		5	

4. Education of young scientists		Number	Credits	Points
4.1. Doctoral (PhD, DLA)	head of school		5	
	head of thematic group		4	
4.2. PhD or DLA supervisor	degree holder		2	
	ongoing		1	
4.3. Supervisor (thesis, BSc/MSc thesis, Student Scientific Conference research paper)	submitted theses/ research papers		3	
	award winning		5	

5. Other professional/scientific activities		Number	Credits	Points
5.1. Academic Committee or national professional committee	functionary		10	
	member		2	
5.2. Editorial board of a domestic journal	member		5	
5.3. Editorial board of a foreign journal	member		10	
5.4. Organising committee of a congress or conference	functionary		5	
	member		2	
5.5. A domestic scientific society	functionary		2	
5.6. An international scientific society	functionary		5	
5.7. Review of PhD dissertation	reviewer		2	
5.8. Review of HAS doctoral dissertation	reviewer		5	
5.9. International expert assignment	expert		2	

6. Teaching activities		Number	Credits	Points
6.1. Classroom teaching (2 classes/week)	in Hungarian		2	
	in English		3	
6.2. Classroom practice (2 classes/week)			1	
6.3. Work placement (30 hours)			1	
6.4. Internship, Supervisor			2	
6.5. Labour practice (3 classes/week)			4	
6.6. Study trip (2x30 hours)			1	
6.7. Organisation of scientific events	conference organisation		2	

Note: the number multiplied by the credits gives the points.

The points awarded to doctoral students and doctoral candidates for authorship and editing are calculated and allocated on the basis of the authors' declaration.

Only those publications are considered scientific publications (whether in traditional or electronic form) which are peer reviewed by an organisation with an editorial board and which is founded to publish and document original scientific results.
Only those journals can be considered scientific or professional journals which have an ISBN or ISSN number and an editorial board.

Annex 12.

S u p e r v i s o r ' s r e p o r t

For participants in an organised doctoral (PhD) programme or in PhD-degree procedure

Data for Identification		
Name of PhD-student		
Research topic		
Name of supervisor		
Academic year		
General features [1]		
1. Frequency of consultation	*frequent* (every 1-2 weeks or more often)	
	rare (monthly)	
	irregular (they hardly ever meet)	
2. The general development of the student	*excellent*	
	meets expectations	
	falls below expectations	
3. Progress in research	*excellent*	
	meets expectations	
	falls below expectations	
Evaluation of the student's s academic progress		
General development		
Progress in research		
Publication activities		

Date

(Signature of supervisor)

[1] *Please put an x in the appropriate place!*