



Doctoral School of Landscape Architecture and Landscape Ecology

Regulations and Rules of Procedure

The Regulations and Rules of Procedure of the Doctoral School are based on the Act CCIV of 2011 on National Higher Education, as amended several times, (hereinafter referred to as the NFtv), the Government Decree No. 387/2012 (XII. 19.) on doctoral schools, the rules of doctoral procedures and habilitation, and the Academic Doctoral Regulations (ADR) of the Hungarian University of Agriculture and Life Sciences.

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1. THE ESTABLISHMENT OF THE DOCTORAL SCHOOL

1.1 Predecessors of the Doctoral School

The Doctoral School of Landscape Architecture and Landscape Ecology (hereafter: DSLALE) operates within the organisational framework of MATE (independently of faculties, institutes and departments), and is the successor to the doctoral programmes "Landscape Architecture", accredited in 1993, and "Decision Support Systems in Food Economy", accredited in 1996, and the Interdisciplinary Agricultural Sciences Doctoral School created by merging the two aforementioned and accredited in 2002, and the Landscape Architecture and Decision Support Systems Doctoral School accredited in 2007. The Doctoral School of Landscape Architecture and Landscape Ecology was established in 2009.

1.2 Activities of the Doctoral School

The **Doctoral School of Landscape Architecture and Landscape Ecology (DSLALE)** aims to cover those scientific research and development fields and tasks that involve the complex study of landscape architecture, landscape ecology and environmental problems, the planning theories and risk and impact assessment for planning, development, conservation and restoration, risk and impact assessment, the preparation of development strategies, and in the field of ecology and landscape ecology, the impacts of climate change and the modelling of natural ecosystems and ecosystems under human influences. Due to the complexity of the ecological and landscape / spatial systems under study, research relies heavily on methods of engineering, mathematics and informatics / geographical information systems.

In the light of the objectives and conditions for sustainable development, landscape architecture, environmental protection, nature conservation and spatial development are undergoing fundamental changes. Accession to the EU has increased the focus on market competitiveness, compliance with EU standards and quality assurance of related activities. The Doctoral School of Landscape Architecture and Landscape Ecology aims to provide a scientific basis for the related tasks of forecasting, planning, decision making and management, which requires a holistic and interdisciplinary approach. From the point of view of agriculture, the value-based management and development of the landscape, and the urban and regional development, the actual condition of the human environment in the broader sense, the landscape, its usability and carrying capacity, the preservation and restoration of the level and diversity of ecosystem services are of paramount importance, as they are a fundamental prerequisite for the quality of life and well-being of society, and the sustainability and liveability of landscapes and settlements. The study of the landscape and the scientific and methodological basis for development and planning policy making based on it are the subject of a wide range of disciplines. Landscape architecture and informatics / geographical information systems play an outstanding role in integrating technical aspects and the aspects of landscape ecology and ecology, economics and environmental aesthetics.

Research areas of the DSLALE include the study of the impacts of local and regional climate, the exposure, sensitivity, vulnerability, risk and the opportunities for ecological adaptation. This research appears in several national and international research projects. Between 2007 and 2011, the activity of the MTA-BCE Research Group on Adaptation to Climate Change was based at the Department of Mathematics and Informatics, Faculty of Horticulture at the Corvinus University of Budapest (BCE). In 2012, the Research Group became a unit of the Department of Mathematics and Informatics (now MATE Institute of Mathematics and Basic Science, Department of Applied Statistics) at BCE, led by the core member of the Doctoral School, László Bozó, member of the Hungarian Academy of Sciences (HAS). Within the field of ecological effects and interactions, it is particularly important to study the environmental elements and processes that can determine or influence land use, and can support the development of a scientifically sound method for the

restoration and reuse of degraded areas. The modelling of restoration processes is crucial to for the planning of the landscape and land use.

The other important scientific unit is the Liveable Settlement Landscape Research Group, covering research fields on the environmental quality and liveability of settlements and urban landscapes as special, modified ecosystems and human habitats of increasing importance in our urbanising world, within the overall field of landscape architecture. The research group was established in the framework of the independent sub-project of the TÁMOP project no. 4.2.1 Sustainability, Liveability research project in 2010-2012, and has since then been a key intellectual unit at the Faculty of Landscape Architecture, as a centre for doctoral students and disciplinary research.

1.3. Subject groups

The research activities of the Doctoral School are mainly in the field of agricultural engineering, and partly in the field of agricultural / environmental sciences. The activity of the School is divided into seven thematic areas.

In Hungary, the field of landscape architecture has more than a hundred years of history of education and research. The field of landscape architecture is diverse, with professional practice, creative design work and research being interdisciplinary. While landscape design and planning are considered as technical disciplines and are integrated parts of the disciplines managed by the Hungarian Chamber of Architects, the scientific basis and applied research can extend beyond the technical approach, and depending on the research objective and the tasks involved may cover:

- topics of landscape ecology, ecology, dendrology, general plant use, nature conservation and landscape protection,
- topics of environmental science (e.g. soil science, water management, local climate etc.),
- aspects and fields of economics and social science (spatial planning, environmental sociology, environmental psychology, environmental health),
- aesthetics, sociology and art history in relation to the design and use of open spaces.

The support of planning theory and methodological approaches therefore requires the research and development of a wide range of aspects. The implementation of the strategic objectives and programmes of certain agencies of United Nations (UNESCO, UNEP) at national level, the scientific basis for the fulfilment of Hungary's commitments in the relevant bilateral and multilateral international conventions, the EU membership, the European Landscape Convention and numerous EU strategies, programmes, directives, decrees and charters related to heritage conservation, urban planning and sustainability issues all represent new challenges in the field. Out of these, overarching the field of landscape architecture, the European Landscape Convention plays has a fundamental role.

Landscape architecture is a combination of knowledge of the sciences, analytical and systematic thinking, and creative skills. Successful training requires a thorough consideration of technical and economic aspects, as well as ecological and visual impacts. Landscape architecture is a four-dimensional way of thinking and creating, requiring spatial vision, good design skills, environmental sensitivity and creativity. Academic training does not, of course, focus on the development of design skills and practice, but research and development in design theory and methodology should also produce valuable results for practice.

In addition to scientific research, the Doctoral School should in the future also create the conditions for a DLA Master's programme, which aims to develop creative and artistic skills in depth. The first steps into this direction are to prepare the teaching staff for the master's degree education, to obtain a doctorate in art and to create a creative workshop that provides an inspiring atmosphere

for doctoral students and offers them substantial design opportunities and tasks. The preparation of the master's teaching staff has already begun: three teachers have already obtained a doctorate in architecture, the DLA degree, and the teachers who teach design courses are recognised designers, and their work is marked by awards and distinctions.

The relatively modest offer of European doctoral programmes in the discipline, especially regarding the DLA programmes, provides a good opportunity for admitting foreign students. This will enable our highly qualified professionals, PhDs and later DLAs, to compete successfully in a strong international field.

The objective of the PhD programme is to fully cover the discipline of landscape architecture according to the needs of our country in carrying out research, planning and development and creative work in the fields of landscape and urban planning, spatial and urban development, landscape protection and landscape planning. Our programme aims to ensure that the knowledge of qualified professionals results in a more liveable, sustainable, beautiful and healthy landscape, urban and human environment, rich in unique landscape features.

The consequences of decisions affecting the state of the environment often occur only in the longer term, and are difficult to assess from economical aspects. This is why the interrelationships between environmental and population ecological elements are necessary to explore, the processes between them to predict (by the means of simulation and stochastic modelling), changes to assess and analyse the whole as an integrated system.

By the means of complex analysis of landscape architecture, landscape restoration, agro-ecology, and landscape and environmental development issues, the subject group aims to cover those scientific research and development directions and tasks which, due to the complexity of the systems analysed, rely heavily on mathematical methods and information technology.

Protecting the environment and ensuring the conditions for sustainable development are becoming increasingly important. This attention has achieved an even more prominent role in the assessment of the impact of climate and, more specifically, of the anthropogenic elements of climate. Although the tools for tackling and resolving these problems are not yet sufficiently developed, landscape ecology and population ecology modelling techniques are undoubtedly an essential methodological element in this field. Applications generally require the description of future conditions for which empirical observations are not yet available or are not available in sufficient quantity or quality. Research on adaptation can be particularly important in urban ecosystems, where the effects of rapid and sometimes drastic changes of system elements are possible to investigate and address by landscape ecological modelling methods. Such research has close relevance to the themes of landscape architecture, in particular to issues of urban ecology, the conditioning and heat island reduction effects of urban green space, or methods and options for plant application, the sustainable and aesthetic design of plant communities in habitats designed for special structures.

In proportion to the magnitude of the environmental risk, the role of forecasting, prevention and preparation increases, which also involves the protection of valuable assets, prevention of potential damage and cost savings.

SUBJECT GROUPS AND SUBJECT GROUP LEADERS

Landscape design and planning of urban green infrastructure	habil. Péter István Balogh PhD, DLA, Professor
Garden history and garden heritage conservation	habil. Albert Fekete PhD, Professor
Regional and landscape planning	habil. Ágnes Sallay PhD, Professor
Environmental and landscape protection	Zsombor Boromisza PhD, Associate Professor
Urban planning and urban ecology	Ildikó Réka Báthoryné Nagy PhD, Associate Professor
Methodological bases for ecological modelling	habil. Márta Ladányi PhD, Professor
Relationships between climate, land use and the ecological pattern of the landscape	László Bozó MHAS, Professor

A description of the subject groups and topics of the Doctoral School of Landscape Architecture and Landscape Ecology is given in Annex 1 of the Regulations and Rules of Procedure. The programmes of the subjects are available on the website.

2. ORGANISATIONAL STRUCTURE OF THE DOCTORAL SCHOOL

The description of organisational structure of the DSLALE contains the basic details of the school, its contact details and the contributors (the Head of the Doctoral School, its Council, the Scientific Secretary and the Subject Leaders).

2.1. The name and details of the Doctoral School

Name:	Doctoral School of Landscape Architecture and Landscape Ecology
Abbreviation:	DSLALÉ
Location:	Budapest
Address:	1118 Budapest, Villányi út 29–43.
P.O. box:	1518 Budapest, Pf.: 53.
Phone:	(1)-482-6594
Website:	www.uni-mate.hu
Operational framework:	Institute of Landscape Architecture, Urban Planning and Garden Design and other institutes at the Hungarian University of Agriculture and Life Sciences

2.2. Contributors to the Doctoral School

- (1) Teaching staff of the Doctoral School are academics and researchers with an academic degree who, on the recommendation of the Head of the DSLALE, are considered by the Council of the Doctoral School to be suitable for teaching, research and supervisor tasks within the framework of the School. A core member of the DSLALE may be an academic or scientific researcher who meets the employment policies and professional criteria of the relevant Government Decree.
- (2) The lists of the core members, topic leaders and lecturers of the DSLALE are set out in **Annexes 4 and 5** of the Regulations and Rules of Procedure.
- (3) The operational management of the Doctoral School is carried out by the Head of the DSLALE. According to the Decree, the Head of the DSLALE may be a full professor who is a core member of the School, and from 1 January 2016, must have a Doctor of Science (DSc) degree. The Head of the DSLALE is elected by the University Doctoral and Habilitation Council (UDHC) and appointed by the Rector for a five-year term. The appointment may be renewed several times.

He/she is responsible for the general representation of the DSLALE and is responsible for the academic quality and training of the School.

- (4) The **Council of the Doctoral School (CDS)** has regular meetings and assists the work of the Head of the DSLALE. Elected by the core members of the DSLALE, members are appointed and dismissed by the President of the UDHC after having heard the opinion of the UDHC (Article 4 of the ADR). The members of the CDS shall be academics and researchers with scientific degrees. The Council shall consist of at least 5 members. Two of the members of the CDS, or 1/3 of the members, shall be persons not employed by the University, and one doctoral student shall participate in the work of the Council, without the right to vote. The Head of the DSLALE may invite external experts to attend the CDS meetings, who shall have the right to participate in the CDS meetings with a consultative role. (About the composition of the CDS: see **Annex 3**)
- (5) The Head of the Doctoral School is also the President of the CDS. If the President of the CDS can not attend, he/she must take care of replacement.
- (6) The mandates of the Head of the DSLALE and the members of the CDS are valid for the actual accreditation term.
- (7) **The Head of the DSLALE** may appoint a secretary to carry out the administrative management and organisational tasks of the School.
- (8) Teaching and research work of the DSLALE are organised under 7 subject groups (see 1.4). The leaders of the subject groups are appointed by the Head of the DSLALE.

The **Supervisor** is responsible for supervising the work of the doctoral student (Article 4(2) of the ADR). If the student is participating in a doctoral programme at a domestic research centre or in a joint doctoral programme with a foreign university, the DSLALE will also appoint an internal, domestic supervisor for the doctoral student. Lecturers and supervisors of the Doctoral School are **those academics and researchers with an academic degree who – on the recommendation of the Head of the Doctoral School – are considered by the Council of the Doctoral School to be suitable** for teaching, research and supervision tasks within the framework of the Doctoral School.

The CDS decides on the topics and the person of the supervisor. A supervisor may be responsible for up to 6 doctoral students and doctoral candidates at a time. As a condition for being appointed as a supervisor, the supervisor must have fulfilled the actual publication requirement for students in training at the relevant PhD school for the previous five years. In approving the appointment of a supervisor, the Doctoral Council will take into account the efficiency of his/her previous activity as a supervisor.

Each doctoral student has one and only one supervisor, who has full responsibility for guiding and supporting the studies and research work of the doctoral student working on a topic, and the preparation of the doctoral candidate for the degree. Dual supervision is only possible in the case of trainings within the framework of international joint-work or interdisciplinary research topics, on the basis of a topic description approved by the CDS and listed with the prior agreement of the UDHC. For the purpose of calculating the maximum number of doctoral students per academic staff member, the co-supervisor position will be counted as a full supervisor position.

3. TASKS AND RESPONSIBILITIES OF THE DOCTORAL SCHOOL

Duties and responsibilities of the Head of the Doctoral School, the Council and the Scientific Secretary, registration system and administration of the DSLALE.

3.1. The Head of the Doctoral School

- (1) Represents the Doctoral School and its Council, and makes decisions on:
 - convening the meetings of the Council of the DSLALE,
 - the invitation of the contributors to doctoral studies,
 - the approval of the doctoral topics, as proposed by the topic group leader,

- disputed study and examination cases of doctoral students (at the first instance) and the requests from students in individual study cases,
 - exemption cases,
 - all matters entrusted to him/her by the Council of the Doctoral School or delegated to him/her by the CDS in its own competence.
- (2) Formulates his/her opinion or makes a proposal on:
- matters coming before the Council of the Doctoral School that concern the core members of the Doctoral School and the members of the CDS.

3.2. The Council of the Doctoral School (CDS)

- (1) The meetings of the Council of the DSLALE are convened by the Head of the Doctoral School (President of the CDS). A quorum of the CDS is constituted when more than 50% of the members are present. All decisions of the CDS shall be taken by simple majority vote. In the event of a tie, the President shall have a casting vote. The general tasks of the CDS are set out in Article 4(2) of the ADR.
- (2) The CDS makes decisions on:
- the professional and scientific requirements of the DSLALE,
 - the internal organisation of the DSLALE,
 - the composition of any ad hoc committees to be set up within the Doctoral School,
 - conducting the admission procedure and the internal ranking of applicants, within the framework of the UDHC schedule,
 - the announcement of doctoral subjects per semester, their number of hours and the way in which they are to be assessed (credit values depend on the number of hours and the way of assessment, as defined in the university regulations),
 - the award of the certificate of the successfully completed studies,
 - the commencement of the public thesis presentation procedure, based on the candidate's past performance and the outcome of the internal presentation,
 - allocation of public and other resources of the school, – approval (or rejection) of research plans.
- (3) The CDS Formulates its opinion and makes a proposal on:
- matters referred to and falling within the remit of the disciplinary Doctoral Committee,
 - the admission to the regular doctoral programme and the admission of candidates who apply for individual programme for the award of the doctoral degree,
 - the members of the examination and assessment boards and the reviewers,
 - the recognition of degrees obtained abroad,
 - the award of the doctoral degree,
 - the applications for habilitation in the DSLALE discipline, conducting a career assessment of the applicant.

3.3 The Scientific Secretary of the Doctoral School

The Scientific Secretary of the Doctoral School is a doctor who assists the Head of the School and who has first-level control of training and research plans, credit certificates, the registry of the DSLALE and student administration.

3.4 Registration system and administration of the Doctoral School

The Secretariat of the UDHC and the Secretariat of the BCDI are responsible for the administration of doctoral studies at university level, and their tasks are those set out in Articles 9 (1) – (3) of the ADR.

- (1) Depending on the subject group, the administration of the academic affairs of doctoral students participating in the regular programme and the accounting of scholarships will be carried out in the Dean's Office of the Faculty of Landscape Architecture or the Faculty of Horticulture. The administration of doctoral students will be transferred to the Doctoral Office of the Buda Campus (hereinafter: DOBC) after the start of the degree procedure.

4. APPLICATION AND ADMISSION REQUIREMENTS

The detailed conditions for application and admission to doctoral studies are set out in Articles 11-16 of the ADR. Applications for admission to the Doctoral School are open to holders of a university degree corresponding to the profile of the School. The list of Masters Courses acceptable at the DSLALE is set out in **Annex 15** of the Regulations and Rules of Procedure. The CDS decides on the admission of students who have completed a Master's programme not included in the list on an individual basis.

- (1) *Specific* conditions for entrance exams for the regular programme:
- Expertise in the proposed research area.
 - Evidence of previous professional and/or scientific experience.
 - Preparation of a 5-7 pages work plan.
 - A supporting proposal from the chosen supervisor is a prerequisite for application and admission, in which the supervisor is also responsible for declaring the candidate's suitability.
 - In accordance with the University Admission Application, the DSLALE requires a first language examination, which is a "C" or "B2" type complex state language examination at intermediate level or an equivalent in one of the world languages required by the School. Only English, German, Russian, French, Italian, Spanish and French may be taken into consideration as a first or as an additional language. In particularly justified individual cases, the DS Admissions Committee or the CDS concerned may decide to accept additional languages. In the case of non-native speakers of Hungarian, the language proficiency requirements are set individually by the CDS.
 - Submission of application documents.
 - Appearance in the DSLALE admission interview, which is administered by an Admission Committee appointed by the DSLALE (**Annex 6**). This may be changed by special decision, if necessary.

The areas to be assessed in the admission interview and related scores are set out in Article 14 of the ADR.

- (2) Application to the individual programme is possible throughout the year. Candidates will undergo a more detailed career assessment than the one required for the regular programme, which will cover their professional expertise, previous teaching and research experience, and ability to carry out independent research. A minimum of 5 years of documented research activity is a prerequisite, the other criteria for the assessment being the same as for the award of the degree. For admission to the individual programme, the DSLALE is allowed to make recommendations to the UDHC four times a year. The DSLALE may also require individual candidates to take examinations in specific subjects, if necessary, as a condition for the initiation of the degree procedure.

5. DOCTORAL TRAINING

5.1. Period of study

- (1a) The duration of doctoral studies for students admitted up to the academic year 2015/2016 is three years (36 months) [hereinafter: three-year training], which can only be completed as a full-time course over six semesters. From the academic year 2016/17 onwards (for the first time as of 1 September 2016), the duration of training for those admitted to the programme is 2+2 years (48 months) [Act CCVI of 2015, Article 15 (1)] [hereinafter referred to as 2+2 years of training], consisting of two four-semester periods.
- (1b) The three-year training is completed by the award of certificate of the successfully completed studies. After successful completion of the studies, the doctoral student in the regular programme may enter the degree procedure. At the end of the studies, the student must

submit a report on the subjects completed, the objectives achieved and the publications, signed by his/her supervisor.

- (1c) The 2+2 years of training consists of a study and research stage and a research and dissertation stage [Act CCVI of 2015, Article 23 (1)]. The study and research stage lasts four semesters, at the end of which a complex examination must be taken. The research and dissertation stage is the degree procedure stage, the aim of which is to obtain a doctoral degree [CCVI Act 2015, § 23 (2)]. This second stage of doctoral studies is also four semesters long.
- (2a) In the second stage of the 2+2 years training, those participating in the individual degree programme can also join if he/she has fulfilled the requirements of the statutory provision [Act CCVI of 2015, Article 23 (3)].
- (2b) Subject to the continuous fulfilment of the training requirements, doctoral students may take up employment with the consent of the supervisor, the head of the department and the head of the doctoral school. Interruptions in the period of study may be authorised by the Head of DSLALE in accordance with the University Doctoral Regulations.
- (3) Doctoral students must earn at least 180 credits during the three-year training and at least 240 credits during the study and research stage of the 2+2 years training [Act CCVI of 2015, Article 15 (1)]. Credits may be obtained through contact hours, other professional activities requiring contact time as well as teaching, research and publication activities, conference participation and work in the field of specialisation, design, planning and expert work. The general provisions for credit acquisition and the list of subjects are set out in the Training Programme of the DSLALE (**Annex 8**).
- (4) In the 2+2 years training, doctoral students must submit a doctoral thesis within three years of the complex examination, according to the doctoral regulations. In cases of exceptional circumstances, as defined by Article 45(2) of the Act on National Higher Education, this deadline may be extended by up to one year as specified in the Doctoral Regulations. During the degree procedure, the maximum period of interruption is two semesters. [Act CCVI of 2015, Article 23 (4)]
- (5a) If the doctoral student declares that he/she does not wish to fulfil his or her training obligations in the next training period, his/her student status will be suspended. A continuous period of suspension shall not exceed two semesters. A student may take advantage of a suspension more than once. The first suspension may only be taken after successful completion of the first reporting period.
- (5b) In the case of the three-year training, the Head of the DSLALE may authorise the interruption of study for several times, for a total of three years, in accordance with the University Doctoral Regulations.
- (6) At the beginning of their studies (by 15 September, after enrolment), doctoral students prepare a 2+2 years individual training plan consulted with the supervisor and the topic group leader, which must be **approved by the Head of the DSLALE**. During the study period, doctoral students are required to complete a training block of at least seven subjects, the detailed requirements for which are set out in **Annex 8** of the Regulations and Rules of Procedure. In justified cases, the curriculum (see **Annex 9**) may be modified at the beginning of each semester in consultation with the supervisor and with the approval of the Head of the School.
- (7) The study and research programme of the doctoral student is approved by the competent CDS on the proposal of the Head of the Doctoral School.

5.3. Research plan

- (1) After the first and fourth semesters, by 31 January, the research plan submitted at the time of application must be confirmed by the doctoral student in consultation with the supervisor, and any modifications must be notified to the Scientific Secretary of the DSLALE who will carry out a first-level assessment. The final approval of the research plans is given by the Head of the DSLALE, upon the decision of the CDS.

5.4. Checkpoints

The student's progress during the semester must be recorded in the Neptun system. Subjects are approved by the lecturers, credits for research and publication, individual research and teaching activities are determined by the supervisor, taking into account the sample curriculum (credit certificates are collected by the supervisor, who also supervises the fulfilments). Foreign students are recommended to take the Hungarian language course, but no credits can be assigned for the language course. The Thesis writing course, which is compulsory in the 8th semester, is signed by the Scientific Secretary in the Neptun. The minimum criteria for obtaining the 20 credits for thesis writing is the presentation of the research results at the research unit, where the staff of the department will decide whether the presented material can be suitable for the internal presentation within one year, and the submission of the minutes and the attendance sheet to the Scientific Secretary.

- (1) At the end of each academic year (by 15 July), the Supervisor prepares a **Supervisor's report**, which is part of the DSLALE quality assurance system. For students taking a complex examination, the deadline for the Supervisor's report is 2 weeks before the complex examination.

6. OBTAINING THE DEGREE

6.1. Starting the degree procedure

- (1a) A doctoral candidate in the three-year training scheme submits his/her application for the degree procedure to the Secretary of the DSLALE in the required format. The application for the degree procedure shall be made using the form in **Annex 4** of the ADR (with the appropriate supporting documents). **Figure 1** shows the phases of doctoral training and the degree procedure. The criteria for obtaining a degree in the individual programme are set out in Article 23(4) of the University Doctoral Regulations.
- (1b) The Secretariat will review the application from a formal point of view and, if necessary, ask the applicant to complement or amend the submitted documents. The CDS reviews the application and its annexes and, in the case of positive decision, makes a proposal to the UDHC to initiate the procedure. The CDS may at the same time propose the two subjects of the doctoral exams and the examiners.
- (1c) Candidates, including those applying for the individual degree procedure, must submit their doctoral thesis within two years of the start of the procedure, at the latest at the time when the appointment of the Selection Committee is requested.
- (1d) The official start date for the degree process is the date of acceptance of the application by the UDHC. The process must be completed within three years of the start of the degree procedure.
- (1e) In the case of an unsuccessful procedure, a new procedure can be initiated at the earliest after two years, and only once for the same School and subject. The same applies if the UDHC does not accept the doctoral candidate's application.
- (2a) The requirements for obtaining the degree in the 2+2 years programme are: passing the complex examination, obtaining the final certificate of the successfully completed studies, gaining the required 240 credits [Act CCVI of 2015 Articles 23 (2), (4a), 15 (1)], documenting the independent scientific work according to the Regulation and Rules of Procedure of the Doctoral School [Article 24. (1) b) of the University Doctoral Regulations], solving scientific problems independently, presenting a thesis or creative work and successfully defending the results at the public presentation.
- (2b) In the degree procedure of the 2+2 years training, the student must fulfil the requirements of the research and dissertation stage [Act CCVI of 2015, Article 23 (2)].
- (2c) In the 2+2 years training, there is no need to apply for the degree, since the degree procedure starts with the successful completion of the complex examination and the enrolment for the next semester.

(2d) The doctoral student who has fulfilled the requirements of the 2+2 years training shall submit an application for the doctoral degree to the UDHC or the DOBC for the consent to defend the doctoral thesis, attaching the documents indicated in Articles 25 (1) a-i, taking also into account Article 25 (2), and the detailed minutes of the presentation organised by the department/institute [Articles 25 (1) a-i, (2), (3), (5) of the University Doctoral Regulations]. The UDHC or the DOBC will review the application from a formal point of view and, if necessary, ask the applicant to complement or amend it [Articles 25 (1) a-i, (2), (3), (5) of the University Doctoral Regulations].

6.2. Professional and language requirements

(1) For obtaining a degree, the DSLALE requires appropriate publication and scientific activity. The minimum requirements specific to the discipline are set out in **Table 1**. The scores for publications and professional products shall be calculated on the basis of **Annex 2** of the Regulations and Rules of Procedure.

Table 1: Threshold scores for PhD procedure

	Landscape architecture	Landscape ecological modelling
1. Publications and citations		
1.1. Journal publication	min. 10	min. 20
1.2 Conference proceedings	min. 10	min. 10
1.3 Book, study book	min. 0	min. 0
1.4 Citations	min. 0	min. 0
1. Total	min. 20	min. 30
2. Products specific to the profession	min. 0	min 0
3. External research resources	min. 0	min. 0
4. Training young scientists	min. 0	min. 0
5. Other scientific activity	min. 0	min. 0
1-5. Total	min. 40	min. 40

Note: At least two of the publications must appear in a foreign language internationally recognised journal. The list of journals accepted by the Department of Agricultural Sciences at the Hungarian Academy of Sciences or the Agricultural Engineering Group of the Technical Department may serve for reference, publication in other journals is acceptable at the discretion of the Supervisor. (Compiled in the above order and including the candidate's own scores, the table is placed at the end of the list of publications, and each articles are scored separately in the right margin of the list.)

(2) Candidates must provide evidence of knowledge of a foreign language relevant to the field of study. In the case of students with Hungarian mother tongue coming from abroad, the language proficiency requirements are determined individually by the DIT. The MATE EDSZ requires the passing of at least a basic language examination as a condition for admission to the complex examination (EDSZ § 14 and § 20(2)).

(1) The language requirement for native Hungarian speaking doctoral students or doctoral candidates:

- a) at least the intermediate level of the language examination type "C" or "B2" required at the time of admission to the course,
- b) proof of knowledge of a second foreign language is not required
- (c) If the student has only one language examination, it must be at intermediate level (B2, complex) in English.

(2) The language requirement for doctoral students or doctoral candidates whose mother tongue is not Hungarian:

(a) a language examination of at least intermediate level "C" or "B2" as required at the time of admission to the course,

b) proof of knowledge of a second foreign language is not required:

(c) If the student has only one language examination, it must in any case be an intermediate level of English (B2, complex). In the case of the regular programme, the professional and linguistic requirements for the degree procedure must be proven no later than the date of the request for the appointment of the Assessment Board. Applicants for the individual degree procedure must provide evidence of fulfilment of the conditions at the time of application.

(3) In the case of the regular programme, the professional and linguistic requirements for the degree procedure must be proven no later than the date of the request for the appointment of the Assessment Board. Applicants for the individual degree procedure must provide evidence of fulfilment of the conditions at the time of application.

6.3. Phases of the degree procedure

The phases of obtaining a doctoral degree consist of a doctoral examination in the case of the three-year training, a complex examination in the case of the 2+2 years training, and an internal and public presentation for participants in both trainings.

To obtain the degree, the doctoral student must prepare and submit a doctoral thesis. [Act CCVI of 2015, Article 37 (1) 1a].

6.3.1. Doctoral or final examination

(1) For students on a three-year programme, the procedure for obtaining a doctoral degree includes a doctoral examination, during which the candidate must take examinations in two subjects before an examination board. The Examination Board will grade the exams of the subjects separately. The choice of the "compulsory" subject/subject area shall be made taking into account **Annex 14** of these Regulations and Rules of Procedure. The CDS shall propose the subjects for the doctoral examination, the chairperson and the members of the Examination Board on the basis of a preliminary proposal from the supervisor, while the UDHC has the right to take decisions. Further provisions on doctoral examination are contained in Article 27 of the ADR.

(2a) For students on the 2+2 years programme, the application for complex examination is subject to the completion of the subjects in the curriculum, and gaining at least 105 credits out of a maximum of 120 credits (the deficit can only be due to publication and/or research credits). For the application to the complex examination, publications must be uploaded to the mtmt system. For the admission to the complex examination, students must have a minimum of 1 journal article and 2 conference full papers published on topics closely related to the research topic.

(2b) The complex examination consists of two main parts: one part assessing the candidate's theoretical knowledge ("theoretical part") and the other part assessing the candidate's academic/artistic progress ("thesis part"). In the theoretical part of the complex examination, the candidate will be tested in at least two subjects/subject areas, the list of which is set out in the doctoral school's curriculum. The theoretical part of the examination may include a written part. The second part of the complex examination consists of a 15-minute presentation of the candidate's knowledge of the literature, the results of his/her research, the research plan for the second stage of doctoral training and the schedule for the preparation of the thesis and the publication of results. The supervisor should have the opportunity to assess the candidate in advance in writing and/or at the examination. The examination board shall assess the theoretical and thesis parts of the examination separately. (Text adopted by the National

Doctoral Council (NDC) at its meeting of 12 February 2016.) When assessing the thesis part, the committee will also assess the coherence of the candidate's publication activities and its relevance to the research topic.

- (2c) A record of the complex examination is made, including a written assessment. The result of the examination shall be announced on the day of the oral exam. A complex examination is successful if a majority of the members of the board pass both parts of the examination. In the case of a failed theoretical part, the candidate may retake the examination in the subject(s)/topic(s) not passed [NDC, 2016] on one further occasion during the examination period.
- (2d) In the case of failure with the thesis part of the examination, the student will not be allowed to repeat it in the same examination period. [NDC, 2016.].
- (2e) The overall assessment of the complex examination may be as follows:
 - a.) summa cum laude if both parts are assessed summa cum laude,
 - b.) rite if both parts are assessed rite, or if the theoretical part of the complex examination is assessed cum laude and the dissertation part rite,
 - c.) insufficiente (unsuccessful) if any part of the examination is assessed unsuccessful,
 - d.) cum laude in all other cases.
- (2f) Student status is terminated if the doctoral student fails to pass the complex examination [Act CCVI of 2015, j].

6.3.2. Internal presentation

- (1) The draft thesis is assessed at an internal workshop presentation. The internal presentation is initiated by the doctoral candidate in writing at least two months before the scheduled date specified by the candidate. It is the responsibility of the supervisor to determine and organise the date and place of the workshop and the list of invited participants.
- (2) The internal presentation can take place in the three-year training after obtaining the certificate of the successfully completed studies, while in the 2+2 years training only after passing the complex examination or in the last (8th) semester of the training.
- (3) The professional quality of the draft thesis and the degree of completion of the thesis are assessed by the Thesis Draft Evaluation Board (TDEB). The TDEB consists of four members (Chair, two Reviewers, Secretary). The presence of at least three members is required for a quorum. The chairperson and the members are appointed by the Head of the Doctoral School. All members must hold at least a PhD degree and at least one member must be an external professional not in full-time employment with the institution.
- (4) During the internal workshop presentation, similarly to the public thesis presentation, the Candidate will introduce the thesis in the form of an oral presentation of up to 20 minutes, and after hearing the reviewers' critique, answer questions and comments from the opponents and the TDEB.
- (5) Following the discussion, in a closed session, the TDEB will make a proposal to accept, revise or reject the draft thesis. The Board's statement shall be authenticated by the signatures of the Chair and Secretary, and sent to the Head of the Doctoral School.
- (6) Documents of the internal presentation include:
 - minutes
 - written opinions by the two reviewers
 - attendance list (at least five professionals with a degree must be present)
 - written opinion by the TDEB.
- (7) Following the internal presentation, the Candidate revises the draft thesis as recommended by the TDEB, and the supervisor and the leader of the subject group certify that this has been done and that the revised thesis is suitable for public presentation (back of the internal title page of the revised thesis). Only on the basis of this confirmation will the CDS proceed to the appointment of the Evaluation Board.

6.3.3. Public presentation

- (1) The doctoral thesis must be prepared and submitted in accordance with the formal requirements of Annex 12 of the ADR. The language of the thesis and the presentation is Hungarian for Hungarian native speakers and English or Hungarian for foreign native speakers, other options may be available with the special permission of the CDS in justified cases. The thesis abstract and the theses should be in both Hungarian and English, and also in electronic form (written on CD).
- (2) The composition of the Evaluation Board and the appointed reviewers will be proposed by the CDS to the UDHC on the basis of preliminary proposals from the supervisor. The date of the public debate must be announced at least three weeks before the thesis presentation, if both reviews are positive. At the same time, the Candidate's theses shall be made public on the doctoral website of the University and the national accreditation platform. The formal and content requirements for the doctoral thesis are set out in **Annex 12 of the ADR**.
- (3) Each phases of the procedure for obtaining the doctoral degree must be recorded according to Articles 32-33 of the ADR. At the end of the procedure, the CDS decides on the Candidate's doctoral degree on the basis of the documents of the evaluation procedure.

6.4. Award of the degree

The University Doctoral and Habilitation Council decides on the award of the doctoral degree on the basis of the recommendation of the Evaluation Board and the Council of the relevant Doctoral School.

7. SPECIFIC PROFESSIONAL REQUIREMENTS FOR HABILITATION

- (1) According to the University Regulations on Habilitation, the Head of the DSLALE takes care of the reviews of the habilitation applications and conducts a career assessment of the applicant. The Habilitation Committee of the DSLALE, which is composed of the habilitated members of the Council of the DSLALE, is responsible for the preliminary review of the application and for making a recommendation. The Committee is chaired by the Head of the CDS. The written opinion and the proposal on the Committee of Experts are sent by the Head of DSLALE to the Chair of the Habilitation Committee by 1 March and 1 October respectively.
- (2) The Habilitation Committee of the School invites two reviewers with recognised professional background, who are experts in the field, to carry out the career assessment within one month and to assess the novelty and scientific value of the theses submitted. One (or both) of the reviewers shall be a professional not employed by the University.
- (3) The Habilitation Committee of the DSLALE (**see Annex 7**) will recommend the acceptance or rejection of the application on the basis of the written assessments (which may be positive or negative, but may also include the need for corrections or completions).
- (4) In the case of acceptance, the Habilitation Committee of the DSLALE will appoint a Committee of Experts for the Applicant, and will designate the titles of the Hungarian classroom and the foreign language scientific presentations. The appointed reviewers shall be selected as members of the Committee of Experts.
- (5) The written opinion on the career assessment and the proposal for the Committee of Experts and the titles of the lectures are sent by the Head of DSLALE to the Chair of the Local Habilitation Committee (LHC) in charge.
- (6) The habilitation application is submitted to the LHC meeting by the LHC Chair.
- (7) In addition to the requirements on the habilitation procedure laid down by law and the university regulations, the DSLALE sets out the following requirements specific to the discipline:
 - The language for the habilitation may be English, German and French. (In justified cases, the Council of the DSLALE may permit other recognised world languages).

- An application for habilitation may be submitted if the Candidate's publication and creative professional activity reaches or exceeds 120 points, taking into account the minimum requirements of **Table 2**.

The DSLALE organises the steps of the habilitation procedure. The administrative tasks are carried out by the Secretary of the Habilitation Committee and the Doctoral Secretariat responsible for the field. The head of the DSLALE and the member professors must be invited automatically to the lectures.

Table 2. Threshold scores for habilitation procedure

	Landscape architecture	Landscape ecological modelling
1. Publications and citations		
1.1. Journal publication	min. 40	min. 40
1.2 Conference proceedings	min. 0	min. 20
1.3 Book, study book	min. 10	min. 20
1.4 Citations	min. 10	min. 20
1. Total	min. 60	min. 100
2. Products specific to the profession	min. 20	min 0
3. External research resources	min. 10	min. 10
4. Training young scientists	min. 5	min. 5
5. Other scientific activity	min. 5	min. 5
1-5. Total	min. 120	min. 120

Note: If the candidate does not reach the threshold scores in the case of items 2, 3, 4, 5, the scores of items 1.1 and 1.2 may be used to achieve the threshold score of 120 points for the total of items 1 to 5. However, the other way round this is not allowed.

8. THE QUALITY ASSURANCE SYSTEM OF THE DOCTORAL SCHOOL

Principles of quality management in doctoral education

The quality management system of doctoral education must be based on principles and methods which, in accordance with the Higher Education Act and the requirements set by the Hungarian Higher Education Accreditation Committee, provide a sufficient guarantee that the academic performance of doctoral candidates will reach the level of those who have obtained a degree in leading international workshops in their field. The DSLALE therefore aims to apply the following principles in the operation of the quality management system.

- 1 *The principle of professional control.* The control of international and national professional and academic public should be applied throughout the doctoral training.

Method: involvement of external (partner universities and major professional circles) and foreign opponents, co-supervisors and experts.

A significant step forward would be the introduction of the model outlined in the Concept for the Development of Higher Education, the professional doctorate, because at present there is no way to invite as an opponent or committee member professionals (either a Hungarian or a foreigner) who are recognised representatives, practitioners or developers of the profession, but who do not have a PhD degree.

- 2 *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.
Method: comparison of publication indicators, raising the standards and refining the discipline specific criteria and standards based on the international review.
- 3 *The principle of taking account of scientific ethical requirements.* In the development and operation of the quality management system, the resolutions of the Scientific Ethics Committee of the Hungarian Academy of Sciences must be widely applied.
Method: regular checking of references.
- 4 *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.
Method: publication of results on the Internet, on the faculty website. Organisation of forums, workshops, conferences for doctoral students, support for publications by providing own foreign language publication opportunities (4D Journal of Landscape Architecture and Garden Art) and/or support for the publication of full papers and articles at conferences in Hungary and abroad.
A problem in this respect is that there are no or very few research tenders in the Central Hungarian Region, which is certainly problematic for the research and publication output of the doctoral schools here.
- 5 *The principle of feedback.* The aim of the quality management system is to provide continuous feedback on the quality of the activities of the lecturers and supervisors in the doctoral training, and members of the Council of the Doctoral School.
Method: student opinion survey
The subject evaluation form used for student opinion survey can be found in Annex 1. This gives the doctoral student the opportunity to evaluate each subject, including the lecturer, independently of the university HALVEL system, in a little more depth.
- 6 *The principle of quality focus.* Through the development and operation of the quality management system, we aim to ensure that both our students and teachers constantly raise their expectations of themselves and their environment, strive to achieve new scientific results, and at the same time make humility towards science an integral part of their values, while a sense of initiative and creativity become a pillar of their thinking. Thinking in terms of natural and ecological systems, that is in the scientific fields of landscape architecture and landscape ecology, the researcher's approach should be based on an approach taking into account natural and social processes and on a creative and innovative thinking in research.
Method: development of a performance control and reward system at university and doctoral school level, for example rewarding outstanding supervisors and doctoral students, and supporting their further work through internal tenders.
- 7 *The principle of protection of intellectual property.* The development of the quality management system should also contribute to ensuring that the doctoral education will continue to be fully in line with the efforts of the European Union and the Republic of Hungary to protect intellectual property.
Method: appropriate legal protection of intellectual products, information provision.
- 8 *The principle of individual responsibility.* The organisation 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.
Method: precise definition of responsibilities and competences, continuous development of the requirements.
- 9 *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 the doctoral training as a whole, an important objective is to ensure that the administrative burden on the academic staff involved in the training does not increase during the development and operation of the quality management system.

Method: provision of forms, regular provision of information, monitoring.

10 *The principle of efficiency.* Following on from the objective of concentrating the resources available to the university, it must be ensured that students are able to study in the best-equipped research facilities under the guidance of the most qualified supervisors in the subject area. Cost-effectiveness should be a priority also in doctoral training. This includes continuous monitoring of costs and analysis of the cost/benefit ratio.

Method: monitoring resources and targets, improving the admission and assessment system.

11 *The principle of practical applicability.* In the operation of the Doctoral School, we take great care to consider whether the choice of dissertation topics and the results of research help to formulate answers to socio-economic challenges.

Method: systematic analysis of topical issues at international and domestic levels, ensuring alignment with these in the selection of themes and methods. Particularly important here may be the continuous liaison with the professional practitioners, the enforcement of developments in planning theory and methodology, e.g. in the field of renewal and organisation of national legislative and professional control.

The elements of the quality management system in the doctoral training and degree process:

- the development of the training structure,
- the development and application of subject contents and examination procedures,
- the call for applications to the training,
- the selection of lecturers and supervisors,
- preparing and organising the entrance examinations, assessing applicants for degrees by individual process,
- managing the choice of themes and subjects for PhD students,
- monitoring the academic progress of PhD students, establishing and operating a registration system,
- the relationship between the doctoral student/candidate and the supervisor,
- the relationship between the doctoral student/candidate and the host department (research unit),
- domestic and international study visits,
- regular reporting of doctoral students and doctoral candidates,
- reporting of the research supervisor,
- evaluation of the doctoral candidates' publication and professional activities,
- preparing and conducting the doctoral examination,
- submission and presentation of the draft dissertation (internal workshop presentation),
- submission and public presentation of the dissertation,
- awarding the doctoral degree,
- student opinion survey about the training,
- providing the study and research infrastructure,
- survey of the opinion of the doctoral graduates,
- managing a registry of graduates and keeping in touch with them after graduation.

The elements of the quality management system indicated in the regulations cover the process of doctoral training and degree acquisition, from the organisation of the training programme to the registration of graduates. In this process, in addition to the documents indicated above, the following are applied consistently:

- Subject evaluation form: completed by each student for at least one subject at the end of each semester. Its purpose is to assess and improve the adequacy of the curriculum.
- Supervisor's report: issued by the supervisor at the end of each academic year for each student. Its purpose is to monitor and document the student's progress and research work, and to ensure goal-oriented progress.

In order to continuously improve the quality of the scientific activity, the Head of the DSLALE regularly collects the opinions and suggestions of doctoral students, lecturers, researchers and other people involved in the work of the Doctoral School, which he/she then summarises and submits to the CDS for detailed discussion every year. The revision and modification of the curriculum and the system of subject selection this year was the result of this process. The curricula have been discussed by the CDS in the past, but in the future more attention will be paid to ensuring that students acquire new knowledge during their training, and not just to continue and develop the topics they have learned at MSc level.

The Subject Evaluation Form and the Supervisor's Report used for the assessments can be found in Annexes 12 and 13 respectively.

The former is a well-established evaluation form for student feedback, which provides a good indication of the usefulness of the subjects offered in the Doctoral School and the attitude of the lecturers. The latter assesses the student's progress. The Supervisor prepares this evaluation at the end of each academic year, which provides good feedback for the student and also provides an opportunity for the supervisor for self-reflection.

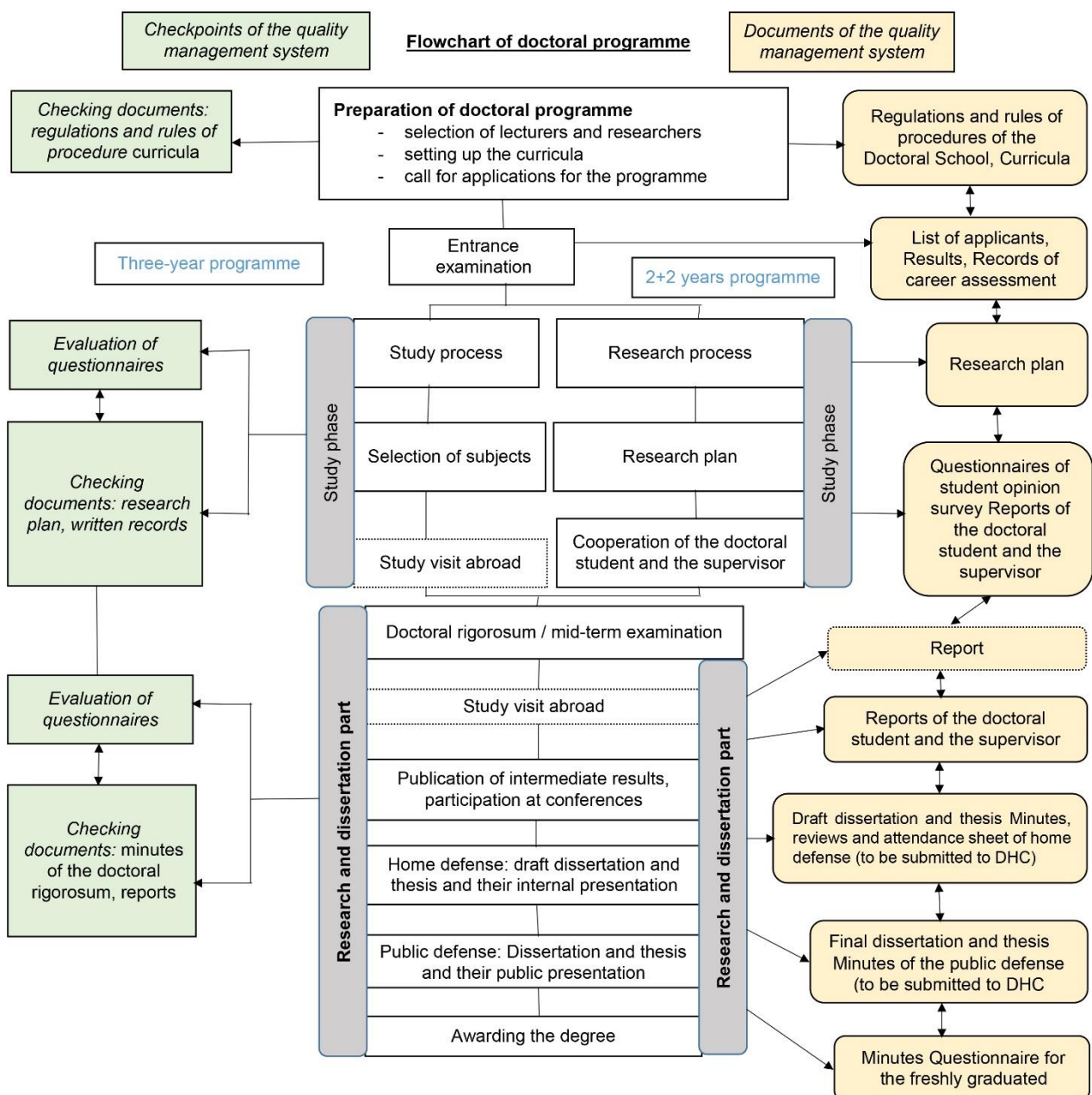


Figure 1. Flowchart of the quality management system for doctoral studies and degree procedure

9. ALUMNI POLICY OF THE DOCTORAL SCHOOL

One of the aims of the DSLALE is to maintain ongoing contact with young people starting their careers after doctorate. On the basis of feedback received upon the letters sent once in a year to the graduated doctoral students, the DSLALE assesses and monitors the employment of graduates, their experiences about job opportunities, difficulties, main reasons for leaving their careers and their competitiveness in the labour market. Through these contacts, the DSLALE also aims to develop joint work and cooperation with new institutions and companies in the field of education and research, to recall doctoral graduates, to invite them to participate actively in the training of the DSLALE, and to expand and improve the job opportunities of doctoral graduates through cooperation and by using their experience.

10. FINANCIAL MANAGEMENT OF THE DOCTORAL SCHOOL

Based on the number of doctoral students, the doctoral school manages the state subsidies set in the university budget, as well as the fees paid by self-financed students, and uses these resources for the purposes of doctoral training.

The internal financial management system is set up by the Council of the Doctoral School (CDS), which assists the professor in charge of the doctoral school, adapting to the economic and professional circumstances that change from year to year (principles of resource allocation, joint procurement, joint tenders, remuneration of doctoral students). The head of the DSLALE decides on specific payments, tenders and individual purchases at his/her own discretion.

11. SUPPLEMENTARY, ENACTING AND TRANSITIONAL PROVISIONS

- (1) These regulations were submitted for adoption to the UDHC following the decision of the Council of the Doctoral School. The Regulations and Rules of Procedure shall enter into force on the date of their adoption, and any previous provisions which are in conflict with these shall be repealed.
- (2) Doctoral students and doctoral candidates whose procedure started before the entry into force of these regulations shall be subject to the regulations and rules, whether current or previous, which are more favourable to those concerned.
- (3) If the doctoral student fulfils his/her service obligation under paragraph 4 (§ 5) of Act CXIII of 2011 on Defence, his/her student status shall be suspended for the duration of the service obligation.

List of Abbreviations:

- ADR - Academic Doctoral Regulations
CDS - Council of the Doctoral School (of Landscape Architecture and Landscape Ecology)
DOBC- Doctoral Office of the Buda Campus
DSLALE - Doctoral School of Landscape Architecture and Landscape Ecology
HAS - Hungarian Academy of Sciences
LHC - Local Habilitation Committee
UDHC - University Doctoral and Habilitation Council

signed by László Bozó
Professor



Doctoral School of Landscape Architecture and Landscape Ecology

Regulations and Rules of Procedure

ANNEXES

The Regulations and Rules of Procedure of the Doctoral School are based on the Act CCIV of 2011 on National Higher Education, as amended several times, (hereinafter referred to as the NFtv), the Government Decree No. 387/2012 (XII. 19.) on doctoral schools, the rules of doctoral procedures and habilitation, and the Academic Doctoral Regulations (ADR) of the Hungarian University of Agriculture and Life Sciences.

**BUDAPEST
29 September 2021**

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RESEARCH FIELDS AND SUBJECT GROUPS AT THE DOCTORAL SCHOOL OF LANDSCAPE ARCHITECTURE AND LANDSCAPE ECOLOGY

RESEARCH FIELD 1. *Landscape Architecture*

In Hungary, the field of landscape architecture has more than a hundred years of history of education and research. The field of landscape architecture is very diverse, encompassing several disciplines. While landscape design and planning are considered as technical disciplines and are integral part of the disciplines managed by the Hungarian Chamber of Architects, the scientific basis and applied research can extend beyond the technical approach, and depending on the research objective and the tasks involved may cover:

- topics of landscape ecology, ecology, dendrology, general plant use, nature conservation and landscape protection,
- topics of environmental science (e.g. soil science, water management, local climate etc.),
- aspects and fields of economics and social science (spatial planning, environmental sociology, environmental psychology, environmental health),
- aesthetics, sociology and art history in relation to the design and use of open spaces.

The support of planning theory and methodological approaches therefore requires the research and development of a wide range of aspects. The implementation of the strategic objectives and programmes of certain agencies of United Nations (UNESCO, UNEP) at national level, the scientific basis for the fulfilment of Hungary's commitments in the relevant bilateral and multilateral international conventions, the EU membership, the European Landscape Convention and numerous EU strategies, programmes, directives, decrees and charters related to heritage conservation, urban planning and sustainability issues all represent new challenges in the field.

Landscape architecture is a combination of knowledge of the sciences, analytical and systematic thinking, and creative skills. Successful training requires a thorough consideration of technical and economic aspects, as well as ecological and visual impacts. Landscape architecture is a four-dimensional way of thinking and creating, requiring spatial vision, good design skills, environmental sensitivity and creativity. Academic training does not, of course, focus on the development of design skills and practice, but research and development in design theory and methodology should also produce valuable results for practice.

In addition to scientific research, the Doctoral School should in the future also create the conditions for a DLA Master's programme, which aims to develop creative and artistic skills in depth. The first steps into this direction are to prepare the teaching staff for the master's degree education, to obtain a doctorate in art and to create a creative workshop that provides an inspiring atmosphere for doctoral students and offers them substantial design opportunities and tasks.

The doctoral training in landscape architecture received international accreditation in 2012. The IFLA Europe accreditation is a recognition of the Hungarian programme covering the whole research field and offers a good opportunity for admitting foreign students, even from the European market of education, since the offer of European doctoral programmes in the discipline is relatively modest, especially regarding the DLA programmes. This will enable our highly qualified professionals, PhDs and later DLAs, to compete successfully in a strong international field.

The objective of the PhD programme is to fully cover the discipline of landscape architecture according to the needs of our country in carrying out research, planning and development and creative work in the fields of landscape and urban planning, spatial and urban development, landscape protection and landscape planning. Our programme aims to ensure that the knowledge

of qualified professionals results in a more liveable, sustainable, beautiful and healthy landscape, urban and human environment, rich in unique landscape features.

Subject group 1. *Theory of landscape design and planning of urban green infrastructure*

Lead by: habil. Péter István Balogh, PhD, DLA, Professor

The value for use of urban open spaces, public and private gardens, public parks, public squares, roads, and other public spaces depends crucially on their proper layout appropriate for the intended purpose and complex function, on the spatial composition of the area, and the rational use of plants, taking the ecological conditions into account. The subject of landscape design is the outdoor space. In addition to its functional value, it also has an aesthetic and emotional impact and influences the well-being of the inhabitants, the image of the settlement, and the formation and evolution of the local character.

The green spaces pervading the urban fabric have an essential role in conditioning and improving the environmental/ecological quality. Without a well-established network of green spaces, well-planned in terms of its layout, quality and quantity, there can be no sustainable and liveable settlements. The green space network is a special living urban structure, which fulfils complex functions: recreational/functional, aesthetic/urban layout and character, economic and ecological/conditioning functions. The overall network of green spaces and its elements became the focus of studies in the field of urban ecology some 30 years ago. Sustainability of settlements and improvement of environmental quality requires modern scientific analyses and assessments, quantitative evaluation of biologically active surfaces, and the analysis of the impact on urban climate.

The subject group covers the functional, technical, ecological, and aesthetic foundations of urban green spaces, research supporting the theoretical and conceptual basis of creative design, and research on technical development for applications in construction and maintenance of design projects. An important part of the training is devoted to the scientific basis of plant use, dendrology, the use of ornamental plants and natural flora elements in design, the appropriate plant use for various habitats, and for the design concept, function, and aesthetic intentions.

Main areas of research and education:

- Design and development of public and private gardens
- Theory of planning public green spaces and green infrastructures
- Design and development of public parks, public gardens, public spaces
- Open space design and furniture
- Urban green spaces
- Landscape design of urban public roads
- Plant use in landscape design
- Use of trees in streets and urban squares, conditioning planting
- Automation opportunities in landscape construction
- Sustainability and irrigation
- Impact of green spaces and biologically active surfaces on urban ecology
- Assessment of the impact of green space facilities on the townscape
- Recreational assessment of green spaces
- Social and health benefits of green spaces
- Criteria of urban liveability for landscape design and green spaces

Subject group 2. *Garden history and garden heritage conservation*
Lead by: habil. Albert Fekete, PhD, Professor

The study of the history of the discipline is the duty of all professions. In all study programmes related to arts, including some fields of landscape architecture, knowledge of the design styles of earlier periods, regarding both the forms and techniques, is a key element. Landscape architecture is a profession that combines the disciplines of planning, technology, and creative design, therefore research in the field is mainly applied. However, a profession that claims to be of academic rank cannot afford not to undertake basic research, of which garden and landscape history have an outstanding importance.

In recent decades, the approach in garden heritage conservation has also undergone a major shift in paradigm, triggered primarily by advances in the techniques of field excavation and the strengthening of the practical side of garden history research. Much more emphasis has been placed on on-site research in the planning process. Heritage conservation expects designers to be aware of and able to interpret research results. And the daily management of the historic gardens poses new challenges in achieving sustainable development despite a large number of visitors and in maintaining historical authenticity. Accordingly, the research directions of this topic are:

- Garden history
- Environmental archaeology
- Conservation of urban heritage
- Principles of monument restoration
- Theory and practice of garden heritage conservation
- Geophysical techniques for garden archaeology
- Landscape history

Subject group 3. *Environmental and landscape protection*
Lead by Zsombor Boromisza, CSc, Associate Professor

Environmental and landscape protection has a special position among the scientific disciplines. With regard to the complex character of the landscape and the environment as complex systems in which environmental, social, and economic forces have an interrelated effect in space and time, the integrated application of the results of the rapidly developing environmental sciences based on an interdisciplinary and holistic approach is essential for the conservation of natural values, the protection of ecosystem services, the sustainable use of natural resources and the improvement of life quality, and is an important task of environmental and landscape protection.

Beyond the general study of the discipline, the programme focuses on the landscape aspects of environmental and landscape protection. The training is primarily devoted to the study of spatial problems, including both theoretical principles and planning methodology. Environmental policy is concerned with both the protection of environmental elements and with issues of environmental protection at global, regional, and local levels. In their work, students explore problems related to environmental and landscape protection, and restoration from a complex perspective including landscape ecological, technical, economical, and aesthetic aspects. The main research topics are:

- Environmental principles of sustainable development
- Environmental policy at global, international and EU levels
- Environmental assessment
- Environmental evaluation
- Protection of everyday landscapes
- Protection of cultural heritage features
- Restoration of degraded areas

- Detection of ecotoxic substances and the possibilities of phytoremediation
- The relationship of landscape ecology and landscape protection
- Exploration and protection of landscape potentials
- Planning principles and methods in landscape protection
- Planning for areas of natural and cultural designations
- Potential application of advanced techniques, geological information systems, and remote sensing instruments

Subject group 4. Regional and landscape planning

Lead by: habil. Ágnes Sallay, PhD, Professor

The aim of regional and landscape planning is to preserve and enhance the productive capacity, conditioning effect, potentials and the aesthetic value of landscapes. Based on ecological research, the purpose of planning is to prevent conflicts of land uses and ecological mismanagement. The landscape planning process must lay the foundations for the harmonious development of the environment and the landscape by applying modern ecological knowledge and aesthetic principles. The protection of land with ecological balancing function, the protection of unique landscape features, and the development of greenway systems have become pressing challenges. The elaboration of the main parts of landscape plans (landscape analysis, landscape assessment, and proposals) with the use of modern technologies is fundamental to spatial planning and development, landscape and local planning. The subject includes regional development procedures aimed at optimising the spatial arrangement of various forms of land use, the residential and leisure areas, the industrial and agricultural areas and their facilities, and the infrastructure for different purposes, in larger regions. This subject group includes teaching and research on the following topics, among others:

- Historical-economic background of agglomeration processes
- Socio-economic and scientific-technical foundations of industrial development, and the related landscape and environmental aspects
- Demographic studies and forecasts
- Environmental impact assessment
- Strategic environmental assessment
- Fitting development into the landscape
- Ecological risk assessment
- Landscape development history
- Landscape assessment methods
- Land use conflict management
- Landscape character protection, unique landscape values
- Determining landscape potential
- Development of urban networks
- Geographic information systems and remote sensing instruments and methods
- Spatial/regional planning processes and methods
- Planning landscapes for tourism

Subject group 5. Urban planning and urban ecology

Lead by: Ildikó Réka Báthoryné Nagy, PhD, Associate Professor

The objective is to explore the technical, ecological, sociological, and aesthetic foundations of urban design. The development and functional performance of settlements and the quality of the urban environment depend crucially on the relevance of urban development concepts and local plans and

their enforceability through the policies. This subject brings together the historical, methodological, urban ecological, sociological and urban architectural research needed for urban development and local planning, which is based on local potentials and values. This can provide a basis for the planning, policy making, management, and operation processes for urban development and local planning in general or for a specific municipality, and thus contribute to the shaping of the urban environment to the benefit of the society from technical/architectural, ecological, sociological, and aesthetic aspects.

RESEARCH FIELD 2. *Landscape ecological modelling*

The consequences of decisions affecting the state of the environment often occur only in the longer term, and are difficult to assess from economical aspects. This is why the interrelationships between environmental and population ecological elements are necessary to explore, the processes between them to predict (by the means of simulation and stochastic modelling), changes to assess and analyse the whole as an integrated system.

By the means of complex analysis of landscape architecture, landscape restoration, agro-ecology, and landscape and environmental development issues, the subject group aims to cover those scientific research and development directions and tasks which, due to the complexity of the systems analysed, rely heavily on mathematical methods and information technology.

Protecting the environment and ensuring the conditions for sustainable development are becoming increasingly important. This attention has achieved an even more prominent role in the assessment of the impact of climate and, more specifically, of the anthropogenic elements of climate. Although the tools for tackling and resolving these problems are not yet sufficiently developed, landscape ecology and population ecology modelling techniques are undoubtedly an essential methodological element in this field. Applications generally require the description of future conditions for which empirical observations are not yet available or are not available in sufficient quantity or quality. Research on adaptation can be particularly important in urban ecosystems, where the effects of rapid and sometimes drastic changes of system elements are possible to investigate and address by landscape ecological modelling methods.

In proportion to the magnitude of the environmental risk, the role of forecasting, prevention and preparation increases, which also involves the protection of valuable assets, prevention of potential damage and cost savings.

Subject group 1. *Methodological bases for ecological modelling*

Lead by: habil. Márta Ladányi, PhD, Professor

The most important tools for investigating questions related to the ecological impacts of landscape management are the establishment and operation of databases based on monitoring and experimentation, modelling, describing changes in ecological communities and also analysing them. Information systems, database-based statistical analyses, and the description, analysis, assessment, and prediction of ecological processes also play a key role in research carried out in this subject group. Databases and users are linked through professional systems of expertise to support decision-makers in choosing the optimal solution based on a high-level knowledge base. The use of geographic information technologies (GIS) is also becoming increasingly important in the study of ecological systems and processes.

The subject group covers mainly methodological aspects, from the issues of data collection and monitoring, through indicator-centred approaches, to strategic, tactical, and statistical modelling.

Mathematical methods will play a central role, relying on both deterministic and stochastic process approaches, simulation, mathematical statistics, and multivariate pattern analysis. Main research areas are:

- Monitoring approaches
- Building and managing databases
- Information systems
- Design and statistical analysis of experiments and monitoring
- Risk analysis
- Expert and decision support systems
- Geographical information systems
- Ecological modelling
- Deterministic and stochastic simulation models

Subject group 2. *The complex relationships between climate, land use and the ecological pattern of the landscape*

Lead by: László Bozó, DSc, member of HAS, Professor

The study of climate, which has a strongly influencing role on landscape ecological patterns, involves the description of the consequences of specific climatic events and the analysis of exposure, sensitivity, vulnerability, adaptation, and risk. In the research processes within this subject group, complex methods are used to identify the correlations, including the tools and results of ecological modelling. The focus will be on the observation, analysis, and assessment of the environmental state of interacting habitats, semi-natural, and man-made ecosystems and their changing conditions due to the influence of climate. Research also cover ecological, social, and economic consequences through the study of the climate – air – soil – flora – fauna interactions. From the point of view of urbanisation trends, an important area of research is the analysis of socio-economic impacts on urban climate, urban land use, and the urban ecosystem.

Research is also focused on the expected evolution of biodiversity, the prediction of risk elements, problems related to agricultural land use, air and soil quality, potential mitigation, and the sustainable utilisation of the ecological potential of the landscape, which together can also shape the ecological pattern of the landscape in a decisive way. Main research areas are:

- Climate impact monitoring and analysis
- Climatic bio-indication
- Biodiversity analysis
- Urban climate, urban ecosystem analysis
- Environmental quality assessment
- Interrelationships between climate – air – soil
- Economic valuation of the natural environment
- Land use
- Geographical information systems, remote sensing
- Risk analysis
- Measurement and analysis of adaptive capacity of the landscape

SCORES FOR PUBLICATIONS AND PROFESSIONAL PRODUCTS

(the following table is used to calculate the scores and should not be copied into the publication list)

1. Publications and citations		Number	Weight	Number*Weight
Journal publications	Indexed in Scopus (publication in an IF or Q1-4 journal)		10	
	Publications in a non-IF, HAS-listed journal in a foreign language		7	
	Publications in a non-IF, HAS-listed journal in Hungarian		5	
	Other scientific publications (except if published in a predatory journal) in a foreign language		5	
	Other scientific publications (except if published in a predatory journal) in Hungarian		3	
Conference proceedings electronic	In Hungarian (full paper)		3	
	In Hungarian (abstract)		1	
	International conference (full paper)		5	
	International conference (abstract)		2	
Book, book chapters	Book, study book, book chapters in a foreign language (per sheets started)	10/sheet (1 sheet = 11 pages, max. 50 per book)		
	Book, study book, book chapters in Hungarian (per sheets started)	6/sheet (1 sheet = 11 pages, max. 30 per book)		
	Books edited, international		10	
	Books edited, domestic		5	
Citations (except for self- citations)	In domestic publications		0,5	
	In international publications		1	

2. Products specific to the profession		Number	Weight	Number* Weight
Agricultural informatics products realised (software development)	Decision support systems		8	
	Professional information systems		5	
	Electronic Professional Databases		5	
	Predictive or simulation system models		5	
Landscape designs and plans realised or approved	Spatial plan			
	— general planner		6	
	— contributor		4	
	Local plan			
	— general planner		6	
	— general planner of landscape chapters		4	
	— contributor to landscape chapters		3	
	Spatial and local development strategies, programmes			
	— general planner		4	
	— contributor		2	
	Landscape project design A (construction plan for areas larger than 2 ha or for nature conservation areas)			
	— general planner		6	
	— contributor		4	
	Landscape project design B (permit plan for areas larger than 2 ha or for nature conservation areas)			
	— general planner		4	
	— contributor		3	
	Landscape project design C (plan at least in permit phase for areas smaller than 2 ha not designated for nature conservation)			
	— general planner		2	
	— contributor		1	
	Scientific documentation and/or management plan for areas under national or international (natural or cultural heritage) designation		4	
	Scientific documentation and/or management plan for areas under local (natural or cultural heritage) designation		2	
	Environmental impact assessment			
	— general planner		3	
— contributor		1		

2. Products specific to the profession		Number	Weight	Number* Weight
Tender results	Prizes at international competitions		6	
	Tenders purchased at international competitions		5	
	Prizes at public domestic competitions		4	
	Tenders purchased at public domestic competitions		3	
	Prizes won or tenders purchased at other competitions		2	
Professional awards	Foreign or international scientific award		10	
	Prizes awarded by HAS or a governmental body		10	
	Prizes awarded by domestic scientific societies, chambers, or professional associations		6	
	Prizes awarded by domestic foundations or professional NGOs		1	
	1st or main prize at the OTDK		5	
	2nd and 3rd prize at the OTDK or 1st prize at the university TDK		3	
	Other prizes for university students		1	
3. External research resources				
Topic leader of domestic scientific R+D calls, research commissions won			5	
Contributor to domestic scientific R+D calls, research commissions won			2	
Topic leader of foreign or international scientific R+D calls, research commissions won			10	
Contributor to foreign or international scientific R+D calls, research commissions won			4	
International commissions as an expert			2	
4. Education of young scientists				
PhD or DLA supervision	successful		2	
	in progress		1	
TDK, MSc, BSc thesis supervision, consultation	submitted		0,5	
	successful or awarded		1	
5. Other scientific activities				
Academic or national professional committee	filling a position		10	
	member		2	
Member of editorial board of a domestic journal			5	
Member of editorial board of an international journal			10	
Organising committee of congresses, conferences	filling a position		5	
	member		2	
Filling a position in a domestic scientific society			2	
Filling a position in an international scientific society			5	
Licenses	Licenses (HU)		2	
	Licenses (other countries)		3	
	Licenses (international)		6	

Scientific publications (whether in traditional or electronic form) are only those accepted for publication, after peer review, by the editorial board of a media established to publish and document original scientific results. Only journals with an ISBN or ISSN and an editorial board will be considered as scientific or professional journals. **Definition of scientific book:** A peer-reviewed publication with an ISBN number published by a recognised scientific publisher, an academic institution or a scientific research centre of the Hungarian Academy of Sciences, displaying the editor and authors, having a total length of more than 10 printed sheets (or 110 pages). A scientific book may be produced by traditional printing or as an e-book if it meets the above registration and scientific requirements.

Spatial plans, local plans, spatial and local development strategies must be referenced along with the approving legislation.

'A' level landscape project designs must be referenced by the address and land registry number of the site of realisation. **'B' and 'C' level project designs** and management plans for designated natural and cultural heritage sites must be referenced by the name of the authorising authority and the number of the authorising document, and, if implemented, by the address and land registry number of the site of implementation.

Scientific documents must be referenced using the registry number of the public collection.

The results of a design competition must be referenced with the bibliographic reference of the printed results.

The list of publication scores is accepted by the CDS on the recommendation of the Scientific Secretary.

THE COUNCIL
of the Doctoral School of Landscape Architecture and Landscape Ecology

Head:	László Bozó, DSc MHAS	
Members:	Márta Ladányi, PhD	
	Albert Fekete, PhD	
	Péter István Balogh, PhD	
	Bálint Czúcz, PhD	External member
	Attila Csemez, DSc	External member
	Márta Gaál, CSc	External member
	Éva Szabóné Erdélyi, PhD	External member
	Erzsébet Gergely, CSc	Invited member
	Kinga Mezősné dr. Szilágyi, CSc	Invited member
Secretary:	Ágnes Sallay, PhD	Scientific Secretary
PhD delegate:	1 student, in rotation between the research fields	Invited member

CORE MEMBERS
of the Doctoral School of Landscape Architecture and Landscape Ecology

Name	Scientific degree	Position	Affiliation
László Bozó	DSc MHAS	Professor	Department of Water Management and Climate Adaptation
Albert Fekete	PhD habil.	Professor	Department of Garden Art and Landscape Construction
Ágnes Sallay	PhD habil.	Professor	Department of Landscape Planning and Regional Development
Péter István Balogh	PhD DLA	Professor	Department of Garden and Open Space Design
Anna Eplényi	PhD	Associate Professor	Department of Garden Art and Landscape Construction
Márta Ladányi	PhD	Associate Professor	Department of Applied Statistics
László Kollányi	CSc	Associate Professor	Department of Landscape Planning and Regional Development

LECTURERS AND SUPERVISORS CONTRIBUTING TO THE ACTIVITY OF THE SCHOOL

Name	Scientific degree	Position	Affiliation
Péter István Balogh	PhD, DLA	Professor	Department of Garden and Open Space Design
Ildikó Réka Báthoryné Nagy	PhD	Associate Professor	Department of Urban Planning and Green Infrastructure
Zsombor Boromisza	PhD	Associate Professor	Department of Landscape Protection and Reclamation
László Bozó	DSc, MHAS	Professor	Department of Water Management and Climate Adaptation
Attila Csemez	DSc habil.	Prof. emeritus	Department of Landscape Planning and Regional Development
Bálint Czúcz	PhD	Research Associate	HAS Ecological Research Centre
Miklós Dombos	PhD	Research Fellow	HAS Research Institute for Soil Sciences and Agricultural Chemistry
Andrea Dúll	PhD	Associate Professor	Eötvös Lóránd University
Anna Eplényi	PhD	Adjunct Professor	Department of Garden Art and Landscape Construction
Albert Fekete	PhD habil.	Professor	Department of Garden and Open Space Design
Krisztina Filepné Kovács	PhD	Adjunct Professor	Department of Landscape Planning and Regional Development
Márta Gaál	CSc	Research Fellow	Institute of Agricultural Economics
Erzsébet Gergely	CSc	Director	Ökopolisz Foundation
Ágnes Herczeg	PhD	Associate Professor	Department of Garden Art and Landscape Construction
Nóra Krisztina Hubayné Horváth	PhD	Associate Professor	Department of Landscape Protection and Reclamation
Zsuzsanna Illyés	CSc	Associate Professor	Department of Landscape Protection and Reclamation
András Ittész	PhD	Associate Professor	Department of Applied Statistics
Sándor Jombach	PhD	Associate Professor	Department of Landscape Planning and Regional Development
András Jung	PhD	Associate Professor	Eötvös Lóránd University
Eszter Karlócainé Bakay	PhD	Associate Professor	Department of Garden and Open Space Design
László Kollányi	CSc	Associate Professor	Department of Landscape Planning and Regional Development
János Balázs Kocsis	PhD	Associate Professor	Budapest University of Technology and Economics
Eszter Kovács	PhD	Associate Professor	Department of Nature Conservation and Landscape Management
Márta Ladányi	PhD habil	Associate Professor	Department of Applied Statistics

Kinga Mezősné Szilágyi	CSc habil., DLA	Professor	Department of Garden and Open Space Design
Ágnes Sallay	PhD habil.	Associate Professor	Department of Landscape Planning and Regional Development
István Schneller	CSc, habil	Professor	Department of Urban Planning and Green Infrastructure
Mariann Simon	CSc, habil	Professor	Department of Urban Planning and Green Infrastructure
Imelda Réka Somodi	PhD	Research Associate	HAS Institute for Ecology and Botany
Krisztina Szabó	PhD	Associate Professor	Department of Garden and Open Space Design
Éva Szabóné Erdélyi	PhD	Associate Professor	Budapest Economic School
Miklós Zsolt Szilvácsku	PhD	Adjunct Professor	Department of Landscape Planning and Regional Development
István Valánszki	PhD	Adjunct Professor	Department of Landscape Protection and Reclamation

**THE ADMISSION COMMITTEE
of the Doctoral School of Landscape Architecture and Landscape Ecology**

Head: László Bozó, MHAS, Professor

Members:

Albert Fekete, PhD, habil. Professor
Márta Ladányi, PhD, habil. Associate Professor
Ágnes Sallay, PhD, habil. Professor
Péter István Balogh, PhD, habil. Professor
Márta Gaál, CSc

Admission interviews take place in front of an Admission Committee of at least 5 members, whose composition is set by the Council of the School on the recommendation of the Head.

**THE HABILITATION COMMITTEE
of the Doctoral School of Landscape Architecture and Landscape Ecology**

Head: László Bozó, MHAS

Members:

Erzsébet Gergely, CSc
Péter István Balogh, PhD, habil.
Albert Fekete, PhD, habil.
Márta Ladányi, PhD, habil.
Ágnes Sallay, PhD, habil.

CURRICULUM
of the Doctoral School of Landscape Architecture and Landscape Ecology

SUBJECTS OFFERED IN HUNGARIAN:

Tárgy neve	Tárgy kódja	Előadó(k)	Kredit	Óraszám (heti)	Ősz/ Tavaszi
Agrárinformációs rendszerek	3MI09NVC04P	Gaál Márta	6	2+0	T
Alkalmazott kutatómódszertan	3MI09NVC06P	Erdélyi Éva	6	2+0	T
Biometria	3MI09NVC07P	Ladányi Márta	6	2+0	Ő
Helyi jelleg és globalizáció a tájépítészetben	6KPHJGLPHD	Fekete Albert	6	2+0	T
Kert- és szabadterépítészet	6KP61KSZÉPHD	Balogh Péter István Jámbor Imre	6	2+0	Ö
Klíma és alkalmazkodás	3KT23NVC09P	Bozó László	6	2+0	Ő/T
Kortárs hazai építészet: visszatérő témák	6TP68KHEPHD	Simon Mariann	6	2+0	Ő
Környezetállapot értékelés	3KT23NCS08P	Bozó László	6	2+0	Ő/T
Környezeti adatbázisok	3MI09NVC14P	Gaál Márta	6	2+0	T
Környezetvédelem	6TKTF4KVPHD	Sallay Ágnes	6	2+0	T
Általános kutatómódszertan	3MI09NAK04P	Erdélyi Éva	6	2+0	Ő
Az ökológiai modellezés módszertana	3MI09NVC15P	Hufnagel Levente	6	2+0	Ő
Kertépítészeti műemlékvédelem	6TKKM4MVPHD	Fekete Albert	6	2+0	T
Statisztikai módszerek	3MI09NAK01P	Ladányi Márta	6	2+0	Ő
Táj- és természetvédelem	6TKTV4TTPHD	Illyés Zsuzsa	6	2+0	Ő
Tájépítészeti növényalkalmazás	6TKKP4TNPHD	Szabó Krisztina	6	2+0	T
Tájértékelés	6TKTF4TÉPHD	Kollányi László	6	2+0	Ő
Tájértékvédelem és tájrehabilitáció	6TKTVTÁJRPHD	Illyés Zsuzsa	6	2+0	T
Tájtervezés	6TKTF4TTPHD	Kollányi László	6	2+0	T
Urbanisztika	6TP68TTSZPHD	Schneller István	6	2+0	Ő
Térinformatika a tájtervezésben	6TF63TERINPHD	Kollányi László	6	2+0	Ő
Többváltozós statisztikai módszerek	3MI09NVC13P	Ittész András	6	2+0	T
Városi terek fejlődéstörténete	6TKKP4VTFPHD	Balogh Péter István	6	2+0	T
Városi zöldinfrastruktúra	6KPZFRPHD	M. Szilágyi Kinga	6	2+0	T

SUBJECTS OFFERED IN ENGLISH:

Course (Tárgy)	Neptun code (Neptun kód)	Professor/ Lecturer (Oktató)	Credits (Kredit)	hours w/sem.	Semester Spring/ Fall (Tavaszi/Ősz)
Geographical Information Systems	6TF63TERINPHD	Kollányi László	6	2/24	Spring
History of Landscape Architecture	6TKKM5TTPHD	Eplényi Anna Vivien	6	2/24	Spring
European spatial policies	6TFESPPHD	Filepné Kovács Krisztina Valánszki István	6	2/24	Spring
Dilemmas of sustainability	6TKTF01PHD	Sallay Ágnes	6	2/24	Fall
Remote sensing	6TFRSPHD	Jombach Sándor	6	2/24	Spring
Biometrics	3MI09NVC07P	Ladányi Márta	6	2/24	Fall
Statistical methods	3MI09NAK01P	Ladányi Márta	6	2/24	Fall
Contemporary Landscape design	6KP61NCS01P	Karlóciné Bakay Eszter	6	2/24	Spring
Urban Greeninfrastructure	6KP61NCS02P	Szilágyi Kinga	6	2/24	Spring
Conservation of historic gardens	6KP61NCS03P	Takács Katalin	6	2/24	Spring
Urban and landscape ecology	6KP61NCS04P	Jombach Sándor	6	2/24	Fall
Sustainable landscape planning	6TVSLPPHD	Boromisza Zsombor	6	2/24	Spring
Adaptation to Climate Change	3KT23NVC09P	Bozó László	6	2/24	Spring/Fall
Assesment of Atmospheric Environment	3KT23NCS08P	Bozó László	6	2/24	Spring/Fall
Multivariate statistical methods	3MI09NVC13P	Ladányi Márta	6	2/24	Spring/Fall
Research in Planning and Design	6KP61NCS05P	Martin van den Toorn	6	2/24	Spring
Research methodology	3MI09NAK04P	Erdélyi Éva	6	2/24	Fall
Applied remote sensing and spatial information systems	3MT17NCS06P	Jung András	6	2/24	Fall
Contemporary Hungarian Architecture: Recurrent Themes	6TP68KHEPHD	Simon Mariann	6	2+0	Fall

During the training period, doctoral students are required to complete a study unit of at least six subjects, which can be chosen from the list of subjects in consultation with the supervisor. Students may not retake subjects taken during their previous studies as part of their training plan. However, students graduated at other higher education institutions may take subjects taught within the framework of the MSc programme. If the topic of the thesis justifies it, subjects from other doctoral schools may also be taken, in agreement with the supervisor. Courses taken at other doctoral schools are counted as 4 credits in the DSLALE. The training plan must be submitted by 15 September of the year in question and must be accepted by the CDS by 15 October of the year in question (the year of admission). If the doctoral student wishes to change his/her training plan, he/she may do so by submitting a request to the Scientific Secretary, which will be approved by the CDS.

(If Fall/Spring is indicated it means that the subject can take place in any semester after consultation, depending on the number of students enrolled.)

Students are required to complete a minimum of 20 credits per semester, which must be attested by a "credit certificate" signed by the supervisor each semester.

Students on the three-year training must accumulate **a total of 180 credits** over the six semesters of the programme in order to obtain the final certificate as follows:

1st Module	Subjects	min. 28/ max. 36 credits
2nd Module	Individual professional performance	no amount specified
3rd Module	Research and publication activities	min. 20 credits
	– research activities	no amount specified
	– publication activities	min. 20 credits
4th Module	Educational activities	no amount specified

Students on the 2+2 years training must accumulate 120+120, **a total of 180 credits** over the four plus four semesters of the programme in order to obtain the final certificate as follows:

1st Module	Subjects	36 credits
2nd Module	Individual professional performance	no amount specified
3rd Module	Research and publication activities	min. 20 credits
	– research activities	no amount specified
	– publication activities	min. 20 credits
4th Module	Educational activities	max. 24 credits, max. 8 per semester

For students in the 2+2 years programme, the application to the complex examination is conditional on: completion of the subjects in the training plan, at least 105 credits earned out of the maximum of 120 credits (the difference can only be due to publication and/or research credits).

SAMPLE SYLLABUS (TRAINING PLAN) FOR PHD STUDENTS ON THE THREE-YEAR TRAINING

Modules	Activities in Modules	Sem. 1	Sem. 2	Sem. 3	Sem. 4	Sem. 5	Sem. 6	Total
	Subjects offered by Lecturers in the Landscape Architecture research field							
1st Subjects	Garden and Open Space Design	4						4
	General Research Methodology	4						4
	Garden Heritage Conservation		4					4
	Landscape and Nature Protection		4					4
	Applied Research Methodology			4				4
	Use of Plants in Landscape Design			4				4
	Landscape Assessments				4			4
	Development of Urban Squares				4			4
	Other subjects							
Landscape Architecture research field total:		8	8	8	8	0	0	32
	Subjects offered by Lecturers in the Landscape Ecology research field							
1st Subjects	General Research Methodology	4						4
	Environmental Databases		4					4
	Statistical Methods	4						4
	Applied Research Methodology				4			4
	Biometrics	4						4
	Multivariate Statistical Methods			4				4
	Geographical Information Systems in Landscape Planning			4				4
	Other subjects (name)			4				4
Landscape Ecology research field total:		12	4	12	4	0	0	32

Modules	Activities in Modules	Sem. 1	Sem. 2	Sem. 3	Sem. 4	Sem. 5	Sem. 6	Total
2nd Individual professional performance	Domestic and foreign study visits, fieldwork, planning workshops					4	4	8
(training beyond the subjects)	(30 hours=1 credit) LOCATIONS MUST BE SPECIFIED!							
3rd Research and publication activities	Individual research (individual research supervised by the Supervisor, serving as a basis for the thesis);	14	12	12	12	12	12	74
	30 hours=1 credit)	(name of library/archive etc.)	(...)	(...)	(...)	(...)	(...)	
	SITE/SOURCE OF RESEARCH MUST BE SPECIFIED!							
	Publication activities (credits as specified in Regulations and Rules of Procedure)		4	8	8	12	14	46
	MEDIA AND NUMBER OF PUBLICATION MUST BE SPECIFIED!		(e.g. article in 4D journal)	(e.g. 8th Conference on Landscape Assessment, fullpaper)	(...)	(...)	(...)	
4th Educational activities	Practical classes (1st instance of 2-hour classes 2 credits, the same class for a different group 1 credit)	4	4	4	4			16
	SUBJECTS MUST BE SPECIFIED!	(Urbanism)	(...)	(...)	(...)			
	Supervision of thesis, tender application, TDK research work (in the year of graduation or the TDK conference)						2	2
1st to 3rd total		18	20	24	24	30	32	180
Landscape Architecture research field total:		26	28	32	32	30	32	180
Landscape Ecology research field total:		30	24	36	28	30	32	180

SAMPLE SYLLABUS (TRAINING PLAN) FOR PHD STUDENTS ON THE 2+2 YEAR TRAINING

Modules	Activities in Modules	Sem. 1	Sem. 2	Sem. 3	Sem. 4		Sem. 5	Sem. 6	Sem. 7	Sem. 8		Total	
1st Subjects	Subject 1	6										6	
	Subject 2	6										6	
	Subject 3		6									6	
	Subject 4		6									6	
	Subject 5			6								6	
	Subject 6				6								6
Subjects total		12	12	6	6							36	
2nd Individual professional performance (beyond the subjects)	Domestic and foreign study visits, fieldwork, planning workshops (30 hours=1 credit) LOCATIONS MUST BE SPECIFIED!				4		4	2				10	
3rd Research and publication activities	Individual research (individual research supervised by the Supervisor, serving as a basis for the thesis; 30 hours=1 credit) SITE/SOURCE OF RESEARCH MUST BE SPECIFIED!	10	10	12	12	First 4 semesters total	12	12	8	8	Second 4 semesters total	84	
	Publication activities (credits as specified in Regulations and Rules of Procedure) MEDIA AND NUMBER OF PUBLICATION MUST BE SPECIFIED!		4	8	8		12	14	20			66	
4th Educational activities	Practical classes (1st instance of 2-hour classes 2 credits, the same class for a different group 1 credit) SUBJECTS MUST BE SPECIFIED!	4	4	4	4								16
	Supervision of thesis, tender application, TDK research work (in the year of graduation or the TDK conference)						2	2	2	2			8
	Thesis elaboration								20		20		
1st, 2nd and 3rd total		14	18	24	28		30	30	30	30			
Total (1st+2nd+3rd+4th)		26	30	30	34	120	30	30	30	30	120	240	

CREDIT CERTIFICATE
End-of-semester details of credit-earning activities

Year 20..../20....., semester

Name of PhD student	Name of Supervisor

Modules	Activities:	Credits
1 Subjects	According to the Registry	
2 Individual preparation		
3 Professional practice		
4 Research and publication activities		
5 Publications		
6 Educational activities		
Credits total		

Notes:

Date: Budapest, 20.....

Date: Budapest, 20.....

Name of Supervisor, Signature

* On the basis of a written certificate (DS = Doctoral School)

The credit certificate can only be submitted after approval by the **Scientific Secretary** of the DSLALE.Written notes by the **Supervisor** to the above table should justify the deviation from the individual training plan approved by the CDS (if necessary).

CREDITS FOR PUBLICATIONS

(The values given in the table are not to be confused with the scores required for the award of the degree)

	Publications	Credits
Journal publications	Publication in an IF journal	10
	Publication in a non-IF journal	4
	Other acceptable publication	2
Conference proceedings	Proceeding (full paper)	3
	Abstract	1
Electronic publications	Published in Hungarian, peer-reviewed	1
	Published in a foreign language, peer-reviewed	3
Book, book chapters, study book	In a foreign language	5
	In Hungarian	3
Products specific to the profession	Prizes won or tenders purchased at international competitions	8
	Prizes won or tenders purchased at domestic competitions	6
	Prizes won or tenders purchased at other competitions	3
	Spatial or Local Plan or Strategy	6
	Landscape project design A or B	6
	Landscape project design C	4
	Scientific documentation and/or management plan for areas under national or international heritage designation	6
	Scientific documentation and/or management plan for areas under local heritage designation	4

SUBJECT EVALUATION FORM
 PhD programme

Subject:

Lecturer:

Academic year:

Semester: a. Fall b. Spring

1 To what extent have the following aspects influenced your choice of subject?

	not at all	to a great extent			
1.1 The subject was recommended by the Supervisor	1	2	3	4	5
1.2 Based on its name, it seemed like a subject that could contribute to my professional development	1	2	3	4	5
1.3 I had a good opinion of the teacher leading the subject, or heard good things	1	2	3	4	5
1.4 As I heard, the credits offered for the subject are relatively easy to obtain	1	2	3	4	5
1.5 The course was compatible with my schedule determined by my work and other commitments	1	2	3	4	5

2 How many times have you attended the classes?

Not even once A few times Approx. half of the classes More than half of the classes
 (almost) All classes

3 Please evaluate the classes of the subject. How much

	not at all	to a great extent			
3.1 was the purpose of the subject clear?	1	2	3	4	5
3.2 new information and professional knowledge were provided?	1	2	3	4	5
3.3 were the classes interesting?	1	2	3	4	5
3.4 was the content comprehensible?	1	2	3	4	5
3.5 did the subject contribute to your professional development?	1	2	3	4	5

4 Please evaluate the Lecturer of the subject. How much were you satisfied with

	not at all	to a great extent			
4.1 with his/her level of preparation for the classes?	1	2	3	4	5
4.2 his/her enthusiasm?	1	2	3	4	5
4.3 his/her teaching methods?	1	2	3	4	5
4.4 his/her relationship with the students?	1	2	3	4	5
4.5 his/her answers to students' questions?	1	2	3	4	5
4.6 the organisation and structure of his/her classes?	1	2	3	4	5

5 Please evaluate the method and content of assessing students' performance. How much

	not at all	to a great extent			
5.1 is the content of the assessment in line with the material covered in the classes?	1	2	3	4	5
5.2 did you find the homework and assigned readings useful for the performance tests or other tasks?	1	2	3	4	5

6 Overall, how much do you think

	not at all	to a great extent			
6.1 your efforts to fulfil the subject have paid off?	1	2	3	4	5
6.2 the subject provided you with knowledge and perspectives that can be used in the long term?	1	2	3	4	5
6.3 did the PhD programme meet your quality expectations?	1	2	3	4	5

7 How do you evaluate the organisation and administrative management of the PhD programme?

- Very poor
- Worse than average
- Average
- Better than average
- Very good

8 What suggestions do you have for improving the subject? If you have any suggestions, please describe!

Thank you for your cooperation!

SUPERVISOR'S REPORT

For participants on the regular doctoral (PhD) training and degree programme

Identification data		
Name of PhD student		
Research topic		
Name of Supervisor		
Academic year		
General features¹		
1. Frequency of consultations	<i>high</i> (minimum once in 2 weeks)	
	<i>low</i> (monthly)	
	<i>irregular</i> (hardly ever meet)	
2. General development of the student	<i>exceeds expectation</i>	
	<i>meets expectation</i>	
	<i>does not meet expectation</i>	
3. Progress in the thesis topic	<i>exceeds expectation</i>	
	<i>meets expectation</i>	
	<i>does not meet expectation</i>	
Evaluation of the student's performance		
<i>General development</i>		
<i>Progress in research</i>		
<i>Publication activity</i>		

Date*(Signature of the Supervisor)*

¹ Please mark the appropriate line with an x!

MANDATORY SUBJECTS FOR DOCTORAL / COMPLEX EXAMINATION**1 Landscape Architecture**

- Garden and Open Space Design
- Garden Heritage Conservation
- Garden History
- Environmental Protection
- Landscape Ecology
- Landscape Planning
- Landscape Protection and Restoration
- Urban Planning
- Spatial Development
- Green Infrastructures

2 Ecological Modelling

- Information Systems, Databases
- Geographical Information Systems
- Research Modelling and Data Evaluation
- Multivariate Statistical Methods
- Risk Assessment
- Ecological Modelling
- Climate and Adaptation

ADMISSIBLE MASTER'S DEGREES

- Agricultural Engineer
- Applied Mathematician
- Ecologist
- Architect
- Horticultural Engineer
- Environmental Engineer
- Environmental Scientist
- Meteorologist
- Landscape Architect
- Urban Engineer
- Agricultural Engineer in Rural Development

RESEARCH PLAN

The 3-4 pages full length version is only required for enrolment in the 2nd semester, to be prepared with the help of the Supervisor. For the application to the programme, only a one-page research plan is required

Name:

Title of the research topic:

1 Research background

- 1.1 Timeliness and relevance of the topic
- 1.2 Literature background and foundation of the research
- 1.3 Gaps in knowledge, inconsistencies, new issues to be addressed on the basis of the above

2 Objectives

- 2.1 Theoretical problems to be solved, scientific objectives
- 2.2 Practical research objectives

3 Methods (just like in the case of scientific articles, in a concise but precise way)

4 Expected results (concisely, precisely)

- 4.1 New scientific results to be achieved:
- 4.2 Practical results / innovations to be achieved:

5 Research schedule and checkpoints (detailed research steps and objectives, publication objectives)

- 5.1 To be achieved by the end of academic year 2 / 2 :
- 5.2 To be achieved by the end of academic year 2 / 2 :
- 5.3 To be achieved by the end of academic year 2 / 2 (or until the end of the study period):

I propose that the research plan be adopted.

Date: Budapest,

.....
 Supervisor
NAME

.....
 Student
NAME

Decision by the Council of the Doctoral School:

.....

Date: Budapest,

.....
 Head of the Doctoral School

CREDIT ACKNOWLEDGEMENT FORM FOR APPLICANTS FOR THE INDIVIDUAL DEGREE PROCEDURE

(the following table is used to calculate the scores and should not be copied into the publication list)

1 min. 40 credits "training, further training" (1 credit = 30 activity hours)	1. Completed PhD subjects, professionally relevant postgraduate courses, trainings, professional workshops etc. (with title, date/duration, organiser + documentation to be attached)				
2 max.80 credits minus any teaching credits Publications and one product specific to the profession	Publications and citations		Number	Credits	Scores
	Journal publications	Publications in IF journals		10	
		Publications in a non-IF, HAS-listed journal in a foreign language		7	
		Publications in a non-IF, HAS-listed journal in Hungarian		5	
		Other scientific publications		2	
	Conference proceedings electronic	In Hungarian (full paper)		3	
		In Hungarian (abstract)		1	
		International conference (full paper)		5	
		International conference (abstract)		2	
	Book, book chapters	Book, study book, book chapters in a foreign language (per sheets started)		10/sheet (1 sheet = 11 pages, max. 50 per book)	
		Book, study book, book chapters in Hungarian (per sheets started)		6/sheet (1 sheet = 11 pages, max. 30 per book)	
		Books edited, international		10	
		Books edited, domestic		5	
	Citations (except for self-citations)	In domestic publications		0,5	
		In international publications		1	
	Products specific to the profession		Number	Credits	Number* Scores
	Agricultural informatics products realised (software development)	Decision support systems		8	
		Professional information systems		5	
		Electronic Professional Databases		5	
		Predictive or simulation system models		5	
	Landscape designs and plans realised or approved	Spatial plan			
		— general planner		6	
		— contributor		4	
		Local plan			
— general planner			6		
— general planner of landscape chapters			4		
— contributor to landscape chapters			3		
Spatial and local development strategies, programmes					
— general planner			4		
— contributor		2			

	Landscape project design A (construction plan for areas larger than 2 ha or for nature conservation areas)			
	— general planner		6	
	— contributor		4	
	Landscape project design B (permit plan for areas larger than 2 ha or for nature conservation areas)			
	— general planner		4	
	— contributor		3	
	Landscape project design C (plan at least in permit phase for areas smaller than 2 ha not designated for nature conservation)			
	— general planner		2	
	— contributor		1	
	Scientific documentation and/or management plan for areas under national or international (natural or cultural heritage) designation		4	
	Scientific documentation and/or management plan for areas under local (natural or cultural heritage) designation		2	
	Environmental impact assessment			
	— general planner		3	
	— contributor		1	
Tender results	Prizes at international competitions		6	
	Tenders purchased at international competitions		5	
	Prizes at public domestic competitions		4	
	Tenders purchased at public domestic competitions		3	
	Prizes won or tenders purchased at other competitions		2	
Professional awards	Foreign or international scientific award		10	
	Prizes awarded by HAS or a governmental body		10	
	Prizes awarded by domestic scientific societies, chambers, or professional associations		6	
	Prizes awarded by domestic foundations or professional NGOs		1	
	1st or main prize at the OTDK		5	
	2nd and 3rd prize at the OTDK or 1st prize at the university TDK		3	
	Other prizes for university students		1	
External research resources		Number	Credits	Scores
Topic leader of domestic scientific R+D calls, research commissions won			5	
Contributor to domestic scientific R+D calls, research commissions won			2	
Topic leader of foreign or international scientific R+D calls, research commissions won			10	

	Contributor to foreign or international scientific R+D calls, research commissions won		4		
	International commissions as an expert		2		
3 max. 20 credits Educational activity, education of young scientists, academic activities	Education of young scientists		Number	Credits	Scores
	Position in a Doctoral School (PhD, DLA)	Head of School		5	
		Subject Group Leader		4	
	PhD or DLA supervision	successful		2	
		in progress		1	
	TDK, MSc, BSc thesis supervision, consultation	submitted		0,5	
		awarded		1	
	Other scientific activities		Number	Credits	Scores
	Academic or national professional committee	responsible for a position		10	
		member		2	
	Member of editorial board of a domestic journal			5	
	Member of editorial board of an international journal			10	
	Organising committee of congresses, conferences	filling a position		5	
		member		2	
	Filling a position in a domestic scientific society			2	
Filling a position in an international scientific society			5		
Licenses	In Hungary		2		
	In a foreign country		3		
	International		6		

Scientific publications (whether in traditional or electronic form) are only those accepted for publication, after peer review, by the editorial board of a media established to publish and document original scientific results. Only journals with an ISBN or ISSN and an editorial board will be considered as scientific or professional journals. **Definition of scientific book:** A peer-reviewed publication with an ISBN number published by a recognised scientific publisher, an academic institution or a scientific research centre of the Hungarian Academy of Sciences, displaying the editor and authors, having a total length of more than 10 printed sheets (or 110 pages). A scientific book may be produced by traditional printing or as an e-book if it meets the above registration and scientific requirements.

Spatial plans, local plans, spatial and local development strategies must be referenced along with the approving legislation.

'A' level landscape project designs must be referenced by the address and land registry number of the site of realisation.

'B' and 'C' level project designs and management plans for designated natural and cultural heritage sites must be referenced by the name of the authorising authority and the number of the authorising document, and, if implemented, by the address and land registry number of the site of implementation.

Scientific documents must be referenced using the registry number of the public collection.

The results of a design competition must be referenced with the bibliographic reference of the printed results.

The list of publication scores is accepted by the CDS on the recommendation of the Scientific Secretary.