

**The training plan, sample curriculum and complex examination requirements of the
Interdisciplinary Doctoral School at the University of Szeged**

Modified: April 21, 2023

Prof. Dr. Márta Széll, head of the Doctoral School

ACADEMIC REQUIREMENTS

General rules:

- A minimum of 20 and a maximum of 45 credits can be earned per semester.
- A minimum of 90 credits must be earned in semesters I-IV. After earning a minimum of 90 credits, students are eligible to take the comprehensive exam.
- A minimum of 240 credits must be earned in 8 semesters (2+2 years).
- 8 credits may be awarded per semester for teaching, for a total of 48 credits.
- Work report: 3 credits may be awarded per occasion, for a minimum of 1 and a maximum of 4 occasions, for a total of 12 credits.

The training plan consists of 4 parts (modules): Modules I–IV

I) Module I: TRAINING/COURSES (a minimum of 38 credits)

I/A: Core subjects (20 credits)

Core subjects													
Name of subjects	Department/person in charge	Number of hours	Requirements	Number of credits in specific semesters								Total credits	Form of report
				1.	2.	3.	4.	5.	6.	7.	8.		
Computer-assisted research methodology	Prof. Dr. Ferenc Peták DSc Department of Medical Physics and Informatics	28	O	6	-	-	-	-	-	-	-	6	B5
Scientific communication and publication. Methods, rules, ethics	Prof. Dr. Ernő Duda Dsc Department of Medical Biology	14	O	-	3	-	-	-	-	-	-	3	B5
Biostatistics lecture	Dr. Krisztina Boda Department of Medical Physics and Informatics	28	O	6	-	-	-	-	-	-	-	6	B5
Biostatistics practice	Dr. Krisztina Boda Department of Medical Physics and Informatics	28	O	2	-	-	-	-	-	-	-	2	B3
Biomedical ethics	Dr. Oguz Kelemen Department of Behavioral Sciences	14	O	-	3	-	-	-	-	-	-	3	B5
Total credit of Basic Modul 1st				14	6	-	-	-	-	-	-	20	

O (Obligatory subject)

I/B. Compulsory subjects linked to the doctoral school's PhD subprogram (specialization) (minimum 18 credits per PhD subprogram (specialization), to be completed during semesters I-IV).

The complex exam must be taken at the end of the second year (semester IV).

Total compulsory training credits (foundation subjects and compulsory subjects per subprogram (specialization): 20+18=38 credits

Compulsory subjects of the 3 subprograms of the Interdisciplinary Doctoral School at the University of Szeged, of which a minimum of 18 credits must be earned per subprogram during semesters I-IV:

1. DOCTORAL PROGRAM IN MEDICAL MICROBIOLOGY AND ANTIMICROBIAL IMMUNITY

Program Director: *Prof. Dr. Katalin Burián, head of department, full professor*

Key Pathogenicity Factors in Bacterial and Viral Infections (Lead instructor: Prof. Dr. Katalin Burián; 28 hours/6 credits, semester 2 or 4, ESE)

Immune Responses to Pathogens (Lead instructor: Prof. Dr. Katalin Burián; 28 hours/6 credits, semester 2 or 4, ESE)

Research Methods in Microbiological Research (Lead instructor: Prof. Dr. Katalin Burián; 28 hours/6 credits, semester 2 or 4, ESE)

2. DOCTORAL PROGRAM IN PREVENTIVE MEDICINE

Program Director: *Prof. Dr. Edit Paulik, head of department, full professor*

Epidemiological Methods (Lead instructor: Prof. Dr. Edit Paulik; 28 hours/6 credits, semester 1 or 3, ESE)

Prevention of Chronic Non-Communicable Diseases (Lead instructor: Prof. Dr. Edit Paulik; 28 hours/6 credits, semester 1 or 3, ESE)

Environmental Health Science (Lead instructor: Prof. Dr. Edit Paulik; 28 hours/6 credits, semester 2 or 4, ESE)

3. DOCTORAL PROGRAM IN MEDICAL GENETICS AND GENOMICS

Program Director: *Prof. Dr. Márta Széll, head of department, full professor*

Clinical Genetics I (Lead instructor: Prof. Dr. Márta Széll; 28 hours/6 credits, semester 2 or 4, ESE)

Clinical Genetics II (Lead instructor: Prof. Dr. Márta Széll; 28 hours/6 credits, end-of-semester examination, semester 2 or 4, ESE)

Current Developments in Human Genetics (Lead instructor: Prof. Dr. Márta Széll; 28 hours/6 credits, semester 2 or 4, ESE)

I/C. Elective courses of the doctoral school:

1. The Role of Lifestyle in Population Health Status (Lead instructor: Prof. Dr. Edit Paulik; 28 hours/6 credits, semester 2 or 4)
2. The Future of Healthcare (Lead instructor: Dr. habil. Norbert Buzás; 28 hours/6 credits, semester 2 or 4)
3. Health Care Marketing (Lead instructor: Dr. habil. Norbert Buzás; 28 hours/6 credits, semester 1, 2, 3, or 4)
4. Bacterial Antibiotic Resistance (Lead instructor: Dr. Gabriella Spengler; 28 hours/6 credits, semester 2 or 3)
5. Molecular Techniques in Clinical Microbiology I/II (Lead instructor: Dr. Ferenc Somogyvári; 28 hours/6 credits, semester 2 or 3)
6. Characteristics, Mechanisms, and Medical Significance of Cell Death Forms (Lead instructor: Dr. Klára Megyeri; 28 hours/6 credits, semester 2 or 3)
7. Journal Club (Lead instructor: Prof. Dr. Katalin Burián; 14 hours/3 credits, semesters 1, 2, 3, 4, 5, 6, 7, 8)
8. Obligate Intracellular Bacteria (Lead instructor: Dr. Dezső Virók; 28 hours/6 credits, semesters 1 or 2)
9. Emerging and Re-emerging Infectious Diseases (Lead instructor: Prof. Dr. Katalin Burián; 28 hours/6 credits, semester 2 or 3)
10. Principles, Methods, and Possibilities of the Therapeutic Application of Viruses (Lead instructor: Dr. Klára Megyeri; 28 hours/6 credits, semester 1 or 2)
11. Hospital Informatics (Lead instructor: Prof. Dr. Ferenc Peták; 28 hours/6 credits, semester 2 or 4)

Module II: RESEARCH activity: credits to be earned: **min. 130 credits** / 8 semesters, (30 hours = 1 credit)

Total max.: 172 credits/8 semesters can be earned.

The module consists of two parts:

- experimental work (research work) max. 20 credits/semester
- work report + max. 3 credits/max. 4 times

1. For research work max.: 20 credits/semester can be awarded total: max: 160 credits

30 hours of research work = 1 credit, recommended number of research hours per semester: 600 hours/semester: 20 credits

- | | |
|--|--------------|
| - 150 hours/semester (~7-8 hours per week) | - 5 credits |
| - 300 hours/semester (~15 hours per week) | - 10 credits |
| - 450 hours/semester (~22-23 hours per week) | - 15 credits |
| - 600 hours/semester (~30 hours per week) | - 20 credits |

Recommended credits for research work: 8 x 20 credits: 60 credits/8 semesters

Details of additional, freely selectable credits that can be earned through research work:

- | | |
|--|-------------------------------|
| - participation in continuing education lectures | max. 2 credit points/semester |
| - active conference participation | |
| - Hungarian | 3 credit points |
| - international | 5 credit points |

2. Work report: 3 credits/occasion

total: max: 12 credits

A work report can be held a maximum of 4 times in 4 years (recommended: at the end of the II, IV, VI, and VIII semesters)

By completing the above, a maximum of 172 credits can be earned in the RESEARCH activity module.

Module III: EDUCATIONAL activities (optional): max. 8 credits/semester, total min. 0 credits, max: 48 credits/8 semesters

- 1 hour/week for 14 weeks 2 credits
- 2 hours/week for 14 weeks 4 credits
- 3 hours/week for 14 weeks 6 credits
- 4 hours per week/14 weeks 8 credits

Important: credits can only be awarded for participation in Hungarian-language teaching (teaching, grading papers, supervising demonstrations, examining).

No credits can be awarded for teaching in English or German, as PhD students participating in teaching receive an hourly fee for this.

Module IV: PUBLICATION activity: Training criteria requirement not tied to a semester

To be completed: min. 2 articles. Total: min. 65, max. 90 credits

Number of publications required to obtain a doctoral degree:

- at least 1 publication as first author,
- at least 2 original publications reporting new scientific results, of which at least 1 must be published in a journal with an impact factor, and the combined impact factor of the 2 articles must reach the IF value specified by the subprogram as follows: Impact factor values required for obtaining a doctoral degree by INTER subprogram:

1. MEDICAL MICROBIOLOGY AND ANTIMICROBIAL IMMUNITY	4.0
2. PREVENTIVE MEDICINE	1.0
3. MEDICAL GENETICS AND GENOMICS	4.0

- The corresponding author shall declare whether the candidate may use the paper in their PhD thesis.

Determination of credits for publication:

- Hungarian-language article, without IF: 5 credits
- Article in Hungarian with IF: 10 credits
- Article in English without IF: 20 credits
- Article in English with IF: 45 credits

Poster presentation at a Hungarian conference: 3 credits

Poster presentation at an international conference*: 5 credits

Presentation at a domestic conference: 3 credits

Presentation at an international conference*: 5 credits

* Including those held in Hungary

Total credits available for publication activities (publications, posters, presentations): min. 65 – max. 90 credits

Publication requirements for advancing to the assessment procedure from January 1, 2024:

- One D1 publication, with no additional publications required (However, none of the co-authors may use the same article to fulfill their own requirements.)
- One D1 publication that is also used by another doctoral candidate, plus one additional publication of any classification, in English, which can be co-authored
- One Q1 publication, plus one additional publication of any classification, in English, which may be co-authored
- If the candidate has published only one Q2 publication, then they must submit at least two additional publications of any classification, in English, which may be co-authored.
- If the candidate's first-authored publication is classified as Q3, then three additional publications of any classification in English are required, which may be co-authored.

Total credits available for publication activities (publications, posters, presentations): min. 65 – max. 90 credits

Recommended Sample Training Plan

Credit requirements per semester for a 2+2-year full-time program (min. 20, max. 45 credits)

Semester 1	Core subjects	6 + 6 + 2 credits	Semester 2	Core subjects	3 + 3 credits
	Mandatory subjects	6 credits		Mandatory subjects	6 credits
	Research activity	20 credits		Research activity	20 credits
	Teaching activity	4 credits		Work report	3 credits
				Teaching activity	4 credits
Total		44 credits	Total		39 credits

Semesters 1 and 2 combined may yield a total of **83 credits**,
provided that teaching activities are performed.

Semester 3	Mandatory subjects	6 credits	Semester 4	Research activity	20 credits
	Research activity	20 credits		Work report	3 credits
	Teaching activity	4 credits		Teaching activity	4 credits
Total		30 credits	Total		27 credits

Semesters 3 and 4 combined may yield a total of **57 credits**,
provided that teaching activities are performed.

Comprehensive examination requirement: To be eligible for the comprehensive examination, doctoral students must earn a **minimum of 90 credits**, which may be obtained during semesters 1 to 4.

- If the doctoral student **performs teaching activities** (2 hours per week), a total of **140 credits** may be earned during semesters 1 to 4.
- If the doctoral student **does not perform teaching activities**, the maximum attainable credits during semesters 1 to 4 is **124 credits** (i.e., 140 credits – 16 credits).

Semester 5	Research activity	20 credits	Semester 6	Research activity	20 credits
	Teaching activity	4 credits		Work report	3 credits
				Teaching activity	4 credits
Total		24 credits	Total		27 credits

Semesters 5 and 6 combined may yield a total of **51 credits**,
provided that teaching activities are performed.

Semester 7	Research activity	20 credits	Semester 8	Research activity	20 credits
	Teaching activity	4 credits		Work report	3 credits
				Teaching activity	4 credits
Total		24 credits	Total		27 credits

Semesters 7 and 8 combined may yield a total of **51 credits**,
provided that teaching activities are performed.

Summary: Number of credits that may be earned (compared to the minimum required)

Semesters 1–4	If teaching: '+ teaching'	If not teaching: '– teaching'	If not teaching: '– teaching'
		140 credits > 90 credits	124 credits > 90 credits
Semesters 5–8	If teaching: '+ teaching'	If not teaching: '– teaching'	
		102 credits	102 – 16 = 86 credits
Total in semesters 1–8:		140 + 102 = 242 credits	124 + 86 = 210 credits

The above credit totals are supplemented by publication-related credits, which are independent of the semester and range from a *minimum of 65 credits* to a *maximum of 90 credits*.

V. OTHER REQUIREMENTS

1. Preparation of an annual work report

At the end of each academic year, students are required to prepare an annual report of no more than one page on their work during that year. The formal requirements for the annual work report are set out in Appendix 1.

The report must include:

- the exact details of the student and the training subprogram (e.g., XY, second-year PhD student in full-time training, Neptun code, email address, XY subprogram, ZZ supervisor, RR institute)
- the courses taken and completed, with the results and credit points
- teaching activities, indicating the number of hours and credits (name and code of the subject taught)
- the most important results of the research work
- lectures given (event, venue, date, title of the lecture, proof: e.g., conference program booklet)
- published, accepted, or submitted papers.

The contents of the report signed by the student shall be certified by the signature of the supervisor. The report shall be accepted by the signature of the head of the doctoral school.

One copy of the report shall be submitted to the supervisor, the head of the doctoral school, and the PhD Secretariat by September 15 of the given year, or February 15 in case of cross semester. The accepted version of the report is stored by the Doctoral School, the PhD student and the supervisor.

2. Knowledge of foreign languages

1. At least an intermediate level "C" (complex) state language exam certificate or equivalent certificate in English must be presented. The equivalence of language exams is regulated by government decree. In cases not regulated by government decree, the expert opinion of the University's Foreign Language Center shall be accepted.

2. PhD students involved in the education of German-speaking medical and dental students may choose German instead of English to meet the intermediate language requirements.

3. In the case of foreign citizens whose native language is not Hungarian, their native language shall be accepted as fulfilling the requirement for one of the foreign languages, provided that it meets the language requirements of the doctoral school in question. For them, Hungarian is also considered a foreign language.

3. COMPLEX EXAM requirements for full-time 2+2 year programs

The complex exam committee consists of at least 3 members, at least 1/3 of whom must be external members (external: not employed by the University of Szeged - SZTE)

1. Chair: SZTE university professor
2. Internal member: SZTE lecturer with academic degree
3. External member: non-SZTE lecturer with academic degree

The Doctoral School announces 1-2 exam dates. It is advisable that the complex exam(s) take place in the second half of May or the first half of June so that the complex exams are completed before the exams of new full-time applicants.

Part 2 of the comprehensive exam, repeatability:

- a) theoretical part = professional exam (replaces the previous doctoral comprehensive exam)
If unsuccessful, it can be repeated once during the exam period
- b) dissertation part: dissertation report on the first 2 years (to date) of research + research planned for the next 2 years.

Complex exam (at the end of the fourth semester): consists of two parts (50-50%):

- a) Theoretical part = professional exam (replaces the previous doctoral comprehensive exam):

Based on the compulsory courses of the subprogram, the student can choose 2 subjects/topics from the designated exam subjects/topics to take the exam on, or in case of a discrepancy between the subjects and the research field the leader of subprogram and the doctoral school define the two subjects.

- b) dissertation part: dissertation report on the research conducted during the first 2 years (to date) + research planned for the next 2 years.

Examination organization considerations, recommendations:

- The student is expected to either present a PowerPoint presentation (approximately 10–15 slides) or submit a written report (1.5–2 pages). This material must also be included in the examination records.
- The supervisor is required to submit a written evaluation or recommendation (approximately one page in length) regarding the joint work carried out with the student. This document must be provided to the examination board in advance for review.
- The candidate must submit their dissertation report in writing approximately one week before the examination. This report must also be sent to the examination board in advance for review.
- The supervisor may be present during the dissertation part of the comprehensive examination but may not serve as a member of the examination board.

Regulations concerning the minutes of the comprehensive examination:

Government Decree 87/2015 (IV. 9.) on the implementation of certain provisions of Act CCIV of 2011 on national higher education >>

(4)110 The doctoral comprehensive examination report and **the complex examination report contain:**

- a) the name and institutional identification number of the higher education institution,
- b) the name, student identification number, previous level of education and professional qualifications of the doctoral candidate or doctoral student,
- c) the name and teacher identification number of the supervisor,
- d) the field of science and discipline of the degree to be obtained,
- e) the questions asked during the comprehensive examination and the evaluation of the answers,
- f) the grade of the comprehensive examination or complex examination,
- g) the name, teacher identification number, and signature of the chair and members of the comprehensive examination committee or complex examination committee.

V. FORMAL REQUIREMENTS FOR THE DOCTORAL THESIS

The doctoral dissertation must be written in English. Its total length must not exceed 50 pages, including all figures, tables, and charts; the bibliography is excluded from this page count. The dissertation must be formatted on A4-sized paper, using Times New Roman font, 12-point size, with 1.5 line spacing, standard margins, and must be printed on one side of the page only. The final version must be submitted in one leather-bound hard copy and in electronic format. In addition, a summary booklet of approximately 10–15 pages must be submitted in A5 size, in PDF format (printing is not required). The summary must be prepared in both English and Hungarian. For international students, submission in English only is sufficient. For detailed specifications, please refer to the document titled *“Formal Requirements Regarding the PhD Dissertation and Summary Booklet at the Albert Szent-Györgyi Medical School (2023).”*

Submitting the dissertation for the assessment procedure

The candidate must submit their doctoral dissertation within three years following the comprehensive examination, in accordance with the stipulations outlined in the University's Doctoral Regulations and the Operational Regulations of the Doctoral School of Experimental and Preventive Medicine.

The complete submission, including the dissertation and the summary booklet, must be uploaded to the University's Doctoral Repository after plagiarism screening and submission of the signed Plagiarism Declaration Form. For detailed instructions, please refer to SZTE's Doctoral Repository Uploading Guide, 2024.

The dissertation and the summary booklet must be uploaded by the candidate to the Doctoral Repository. The candidate is required to inform the defense coordinator at the PhD Secretariat and the Doctoral School via email once the upload is complete.

The submission date of the dissertation is the date of upload to the Doctoral Repository. This date is publicly posted on the Repository's website.

The assessment procedure

Once the assessment board has been approved by the Disciplinary Doctoral Council (DDC), the defense coordinator invites the two official assessors to review the doctoral dissertation. Along with the dissertation, the coordinator provides the assessors with the Repository link, the Plagiarism Declaration Form, and the D-Q validation. The assessors are given a period of two months – within the teaching period of the semester – to complete their review.

The PhD dissertation must be submitted in one leather-bound copy to the defense coordinator at the PhD Secretariat, no later than the date of the PhD defense.

Once two positive reviews are received, the defense date may be scheduled (the announcement can proceed regardless of whether the candidate's responses are available at the time). The dissertation must be submitted for public defense within two months during the teaching period of the semester.

The defense coordinator, with the assistance of the candidate and supervisor, prepares the invitation and sends it to the assessment board and DDC members. The composition of the assessment board must be indicated in the invitation for the public debate.

Based on the invitation, the administrator of the Doctoral School announces the defense on the Hungarian Doctoral Council's website. The defense invitation is also published in the upcoming Faculty Newsletter.

Approval of the PhD degree

Following a successful defense, the DDC first votes to approve the dissertation, after which the University Doctoral Council decides on the conferral of the doctoral degree. The PhD title is officially granted upon the University Doctoral Council's decision. Within 30 days from that date, the University of Szeged issues and delivers the doctoral certificate to the holder.