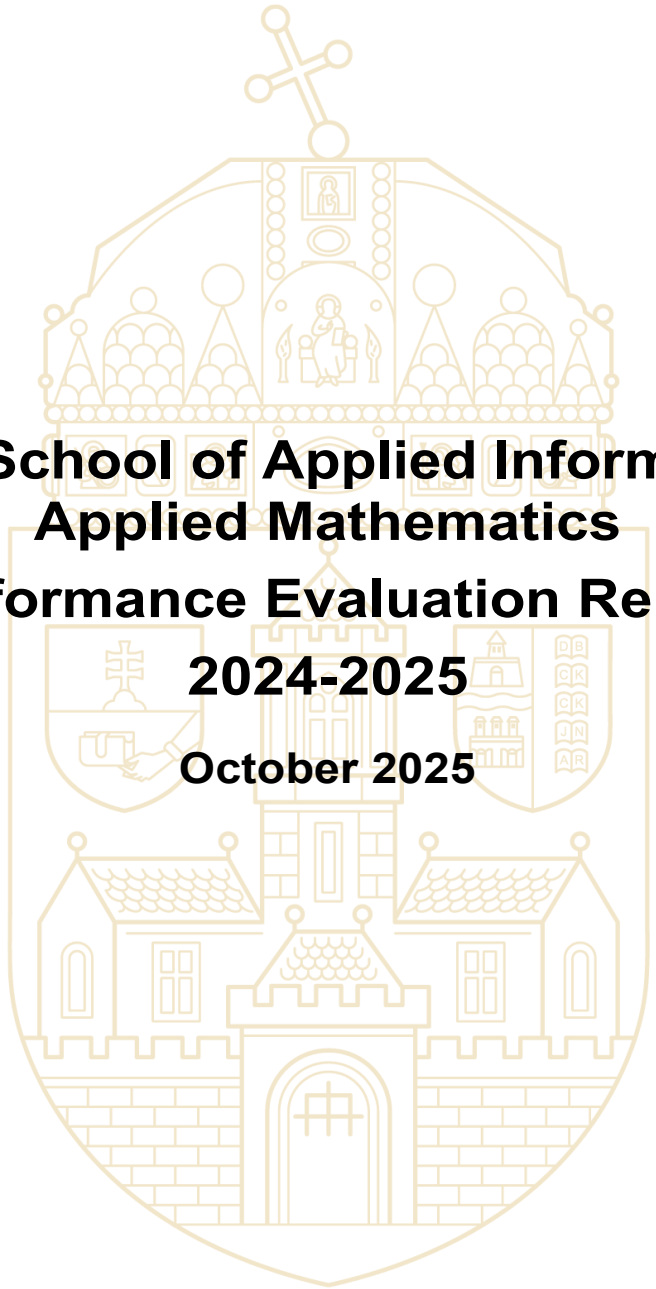

Doctoral School of Applied Informatics and Applied Mathematics

Performance Evaluation Report

2024-2025

October 2025

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1. Monitoring and evaluating the achievement of quality objectives

Based on the quality objectives formulated in the 2023/2024 academic year, the two semesters of the 2024/2025 academic year can be evaluated across five categories.

1.1. Student-related objectives

1.1.1. Criteria for student-related objectives

Reaching 100% corresponds to the objective as the fulfillment of minimum requirements, while surpassing this target to the greatest extent possible is desirable.

Strategic Objective / Task	Quality Objective	Indicator	Remarks
Reduction of attrition / Semester I	Reducing the attrition of active doctoral students to prevent drop-outs from Semester I.	100 × First-Semester Cumulative Credits / 20	A minimum requirement of 20 credits corresponds to 100%.
Reduction of attrition / Semester II	Reducing the attrition of active doctoral students to prevent drop-outs from Semester II.	100 × Second-Semester Cumulative Credits / 45	A minimum requirement of 45 credits corresponds to 100%.
Reduction of attrition / Semester III	Reducing the attrition of active doctoral students to prevent drop-outs from Semester III.	100 × Third-Semester Cumulative Credits / 75	A minimum requirement of 75 credits corresponds to 100%.
Reduction of attrition / Semester IV	Reducing the attrition of active doctoral students to prevent drop-outs from Semester IV.	100 × Fourth-Semester Cumulative Credits / 90	A minimum requirement of 90 credits corresponds to 100%. (It is also a prerequisite for admission to the complex exam.)
Reduction of attrition / Complex Exam	Reducing the attrition of active doctoral students to prevent drop-outs at the complex exam.	100×{ 0 or 1}	It can take a value of either 0% or 100%: not fulfilled or fulfilled.
Reduction of attrition / Semester V	Reducing the attrition of active doctoral students to prevent drop-outs from Semester V.	100 × Fifth-Semester Cumulative Credits / 110	A minimum requirement of 110 credits corresponds to 100%.
Reduction of attrition / Semester VI	Reducing the attrition of active doctoral students to prevent drop-outs from Semester VI.	100 × Sixth-Semester Cumulative Credits / 150	A minimum requirement of 150 credits corresponds to 100%.
Reduction of attrition / Semester VII	Reducing the attrition of active doctoral students to prevent drop-outs from Semester VII.	100 × Seventh-Semester Cumulative Credits / 180	A minimum requirement of 180 credits corresponds to 100%.

Reduction of attrition / Semester VIII	Reducing the attrition of active doctoral students to prevent drop-outs from Semester VIII.	100 × Eighth-Semester Cumulative Credits / 240	A minimum requirement of 240 credits corresponds to 100%.
Cumulative publication performance since the commencement of PhD studies, based on the MTMT2 database records	This indicator monitors the incentive for individual career building and evaluates the productivity of the period spent in the doctoral program.	Cumulative publication credits since the commencement of PhD studies	It is not percentage-based and has no defined minimum requirement.

1.1.2. Fulfillment of student-related objectives

To measure the achievement of student-related objectives, we examined students' credit progression during the Autumn and Spring semesters of the 2024-2025 academic year; the results are presented (depersonalized) in the table below.

Academic Year / Semester	No. of Active Semesters	Cumulative Credits Completed	% (relative to minimum)	Cumulative Publication Credits	% (min 75)
2024/25/1	1	26	130	0	0,00
2024/25/1	1	40	200	0	0,00
2024/25/1	1	24	120	0	0,00
2024/25/1	1	56	280	30	40,00
2024/25/1	1	48	240	0	0,00
2024/25/1	1	48	240	0	0,00
2024/25/1	1	32	160	0	0,00
2024/25/1	1	31	155	0	0,00
2024/25/1	1	64	320	24	32,00
2024/25/1	1	8	40	0	0,00
2024/25/1	1	47	235	0	0,00
2024/25/1	1	56	280	18	24,00
2024/25/1	1	56	280	12	16,00
2024/25/1	1	64	320	24	32,00
2024/25/1	1	48	240	0	0,00
2024/25/1	1	61	305	15	20,00
2024/25/1	1	56	280	24	32,00
2024/25/1	1	48	240	0	0,00
2024/25/1	1	32	160	0	0,00
2024/25/1	1	73	365	27	36,00
2024/25/1	1	48	240	0	0,00
2024/25/1	1	47	235	0	0,00
2024/25/1	2	101	224,44	52	69,33
2024/25/1	2	54	120,00	0	0,00

2024/25/1	2	102	226,67	24	32,00
2024/25/1	2	58	128,89	0	0,00
2024/25/1	3	148	197,33	66	88,00
2024/25/1	3	128	170,67	24	32,00
2024/25/1	3	131	174,67	70	93,33
2024/25/1	3	121	161,33	36	48,00
2024/25/1	3	234	312,00	155	206,67
2024/25/1	3	89	118,67	7	9,33
2024/25/1	3	143	190,67	48	64,00
2024/25/1	4	146	162,22	58	77,33
2024/25/1	4	263	292,22	137	182,67
2024/25/1	4	120	133,33	32	42,67
2024/25/1	passive	passive	passive	passive	passive
2024/25/1	passive	passive	passive	passive	passive
2024/25/1	4	195	216,67	69	92,00
2024/25/1	5	363	330,00	157	209,33
2024/25/1	5	180	163,64	60	80,00
2024/25/1	5	179	162,73	80	106,67
2024/25/1	5	253	230,00	120	160,00
2024/25/1	5	171	155,45	84	112,00
2024/25/1	5	211	191,82	128	170,67
2024/25/1	5	249	226,36	132	176,00
2024/25/1	5	208	189,09	75	100,00
2024/25/1	5	201	182,73	39	52,00
2024/25/1	5	234	212,73	41	54,67
2024/25/1	6	427	284,67	239	318,67
2024/25/1	6	194	129,33	57	76,00
2024/25/1	6	299	199,33	98	130,67
2024/25/1	6	248	165,33	124	165,33
2024/25/1	6	166	110,67	72	96,00
2024/25/1	6	223	148,67	108	144,00
2024/25/1	7	369	205,00	236	314,67
2024/25/1	7	308	171,11	173	230,67
2024/25/1	7	316	175,56	185	246,67
2024/25/1	7	205	113,89	72	96,00
2024/25/1	7	341	189,44	186	248,00
2024/25/1	7	502	278,89	324	432,00
2024/25/1	passive	passive	passive	passive	passive
2024/25/1	7	187	103,89	30	40,00
2024/25/1	7	185	102,78	60	80,00
2024/25/1	7	548	304,44	398	530,67
2024/25/1	8	538	224,17	227	302,67
2024/25/1	8	549	228,75	294	392,00
2024/25/1	8	314	130,83	34	45,33

2024/25/1	passive	passive	passive	passive	passive
2024/25/1	8	301	125,42	155	206,67
2024/25/2	1	26	130,00	0	0
2024/25/2	1	35	175,00	0	0
2024/25/2	1	34	170,00	0	0
2024/25/2	1	43	215,00	0	0
2024/25/2	1	22	110,00	0	0
2024/25/2	1	44	220,00	6	8
2024/25/2	1	34	170,00	12	16
2024/25/2	1	48	240,00	5	7
2024/25/2	2	48	106,67	0	0
2024/25/2	2	77	171,11	0	0
2024/25/2	2	100	222,22	24	32
2024/25/2	2	132	293,33	63	84
2024/25/2	2	101	224,44	54	72
2024/25/2	2	108	240,00	60	80
2024/25/2	2	60	133,33	0	0
2024/25/2	2	80	177,78	24	32
2024/25/2	2	84	186,67	15	20
2024/25/2	2	90	200,00	24	32
2024/25/2	2	100	222,22	24	32
2024/25/2	2	72	160,00	18	24
2024/25/2	2	48	106,67	0	0
2024/25/2	2	85	188,89	0	0
2024/25/2	2	83	184,44	0	0
2024/25/2	2	102	226,67	36	48
2024/25/2	2	31	68,89	0	0
2024/25/2	2	56	124,44	0	0
2024/25/2	3	112	149,33	12	16
2024/25/2	3	82	109,33	0	0
2024/25/2	3	135	180,00	24	32
2024/25/2	3	114	152,00	24	32
2024/25/2	3	157	209,33	76	101,33
2024/25/2	4	164	182,22	48	64,00
2024/25/2	4	168	186,67	48	64,00
2024/25/2	4	115	127,78	7	9,33
2024/25/2	4	266	295,56	179	238,67
2024/25/2	4	158	175,56	78	104,00
2024/25/2	4	161	178,89	66	88,00
2024/25/2	5	342	310,91	181	241,33
2024/25/2	5	189	171,82	76	101,33
2024/25/2	5	256	232,73	105	140,00
2024/25/2	5	186	169,09	63	84,00
2024/25/2	6	279	186,00	41	54,67

2024/25/2	6	386	257,33	237	316,00
2024/25/2	6	260	173,33	63	84,00
2024/25/2	6	249	166,00	87	116,00
2024/25/2	6	277	184,67	135	180,00
2024/25/2	6	328	218,67	230	306,67
2024/25/2	6	210	140,00	108	144,00
2024/25/2	6	290	193,33	132	176,00
2024/25/2	6	166	110,67	24	32,00
2024/25/2	6	216	144,00	92	122,67
2024/25/2	6	195	130,00	60	80,00
2024/25/2	7	263	146,11	124	165,33
2024/25/2	7	207	115,00	96	128,00
2024/25/2	7	262	145,56	132	176,00
2024/25/2	7	314	174,44	98	130,67
2024/25/2	7	209	116,11	57	76,00
2024/25/2	7	514	285,56	283	377,33
2024/25/2	8	374	155,83	204	272,00
2024/25/2	8	337	140,42	144	192,00
2024/25/2	8	200	83,33	60	80,00
2024/25/2	8	280	116,67	132	176,00
2024/25/2	8	361	150,42	215	286,67
2024/25/2	8	335	139,58	185	246,67
2024/25/2	8	432	180,00	284	378,67
2024/25/2	8	527	219,58	324	432,00
2024/25/2	8	597	248,75	422	562,67
2024/25/2	passive				
2024/25/2	passive				
2024/25/2	passive				
2024/25/2	passive				

The following descriptive statistics provide a semester-by-semester breakdown of the data.

Academic Year / Semester	Average Cumulative Credit Completion (Semester I) %	Min. (%)	Max. (%)
2024/2025/1	230,23	40	365
2024/2025/2	178,75	110,00	240,00

Academic Year / Semester	Average Cumulative Credit Completion (Semester II) %	Min. (%)	Max. (%)
2024/2025/1	175,00	120,00	226,67
2024/2025/2	179,88	68,89	293,33

Academic Year / Semester	Average Cumulative Credit Completion (Semester III) %	Min. (%)	Max. (%)
2024/2025/1	189,33	118,67	312,00
2024/2025/2	160,00	109,33	209,33

Academic Year / Semester	Average Cumulative Credit Completion (Semester IV) %	Min. (%)	Max. (%)
2024/2025/1	201,11	133,33	292,22
2024/2025/2	191,11	127,78	295,56

Academic Year / Semester	Average Cumulative Credit Completion (Semester V) %	Min. (%)	Max. (%)
2024/2025/1	204,45	155,45	330,00
2024/2025/2	221,14	169,09	310,91

Academic Year / Semester	Average Cumulative Credit Completion (Semester VI) %	Min. (%)	Max. (%)
2024/2025/1	173,00	110,67	284,67
2024/2025/2	173,09	110,67	257,33

Academic Year / Semester	Average Cumulative Credit Completion (Semester VII) %	Min. (%)	Max. (%)
2024/2025/1	182,78	102,78	304,44
2024/2025/2	163,80	115,00	285,56

Academic Year / Semester	Average Cumulative Credit Completion (Semester VIII) %	Min. (%)	Max. (%)
2024/2025/1	177,29	125,42	228,75
2024/2025/2	159,40	83,33	248,75

Academic Year / Semester	Average Cumulative Publication Credit Completion (Semester II) %	Min. (%)	Max. (%)
2024/2025/1	190,00	0	520
2024/2025/2	190,00	0	630

Academic Year / Semester	Average Cumulative Publication Credit Completion (Semester III) %	Min. (%)	Max. (%)
2024/2025/1	232	28	620
2024/2025/2	108,80	0	304

Academic Year / Semester	Average Cumulative Publication Credit Completion (Semester IV) %	Min. (%)	Max. (%)
2024/2025/1	296,00	128	548
2024/2025/2	284,00	28	716

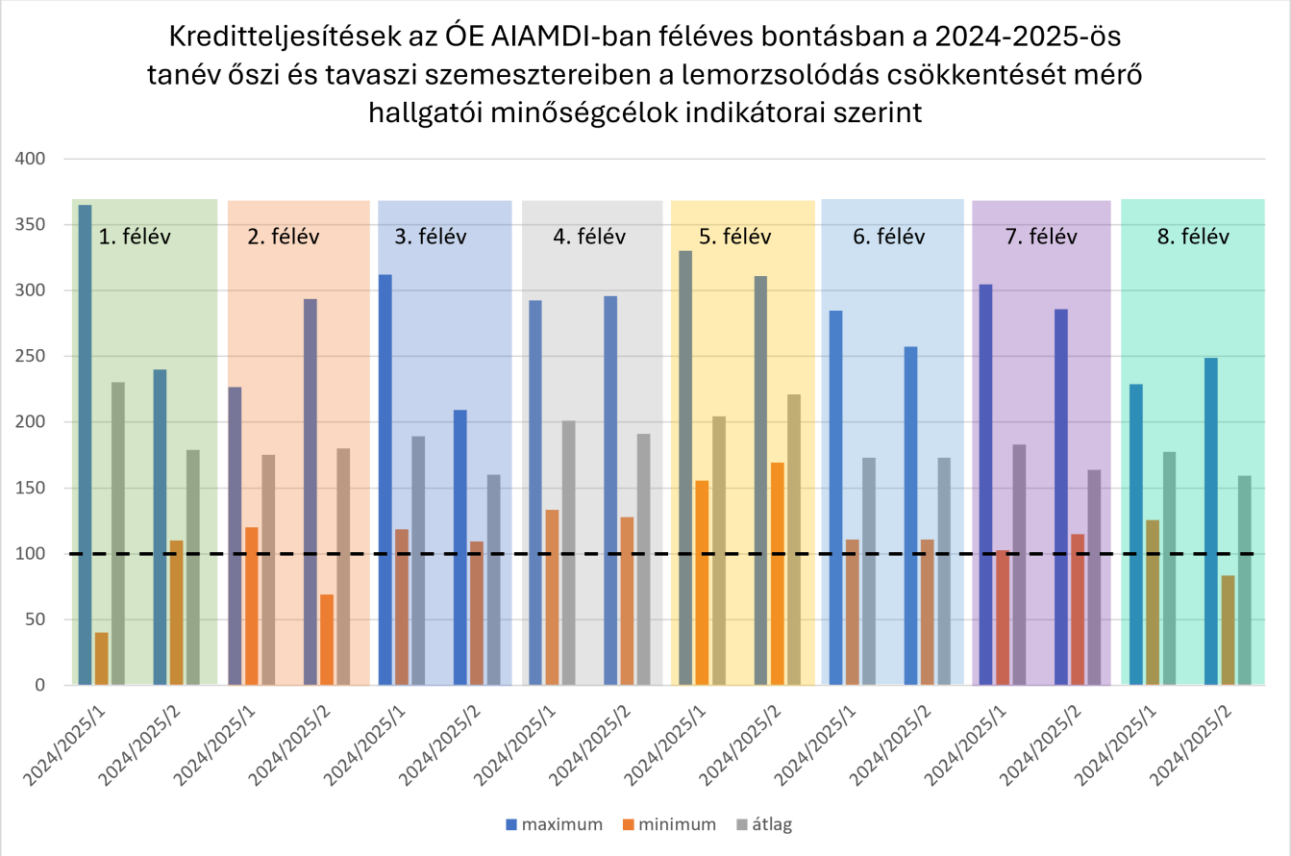
Academic Year / Semester	Average Cumulative Publication Credit Completion (Semester V) %	Min. (%)	Max. (%)
2024/2025/1	247,00	97,5	572,5
2024/2025/2	265,63	157,5	452,5

Academic Year / Semester	Average Cumulative Publication Credit Completion (Semester VI) %	Min. (%)	Max. (%)
2024/2025/1	232,67	114	478
2024/2025/2	219,82	48	474

Academic Year / Semester	Average Cumulative Publication Credit Completion (Semester VII) %	Min. (%)	Max. (%)
2024/2025/1	284,44	46,15	612,31
2024/2025/2	202,56	87,69	435,38

Academic Year / Semester	Average Cumulative Publication Credit Completion (Semester VIII) %	Min. (%)	Max. (%)
2024/2025/1	236,67	45,33	392,00
2024/2025/2	291,85	80,00	562,67

The statistics describing the semesterly dropout rates are presented in a summary figure, where a dashed line indicates the fulfillment threshold for the indicator. It is clearly visible that the required indicator was met for all eight semesters, significantly exceeding the minimum performance threshold. The indicator for cumulative publication performance was also fulfilled.



1.2. Faculty-related objectives

1.2.1. Criteria for faculty-related objectives

Reaching 100% corresponds to the objective as the fulfillment of minimum requirements, while surpassing this target to the greatest extent possible is desirable.

Strategic Objective / Task	Quality Objective	Indicator	Remarks
Ensuring activity of the Doctoral School's faculty	Continuous monitoring of the faculty's professional suitability based on the MTMT2 database.	100 × Annual Publication Credits / 24	The minimum requirement of 24 credits corresponds to 100%: at least one paper presented at a recognized international conference

1.2.2. Fulfillment of faculty-related objectives

To measure the fulfillment of the faculty-related objectives, we examined the faculty's publication performance based on public data available in the MTMT database, in the form of

credit point calculations for the year 2025. The credit points and the resulting indicator values are presented in the table provided in a separate appendix.

Based on the data, the faculty's publication performance shows a very high dispersion (234%), but the vast majority meet (and in many cases, exceed several times over) the minimum indicator criteria, with the average being 235%.

1.3. Supervisor-related objectives

1.3.1. Criteria for supervisor-related objectives

Reaching 100% corresponds to the objective as the fulfillment of minimum requirements, while surpassing this target to the greatest extent possible is desirable.

Strategic Objective / Task	Quality Objective	Indicator	Remarks
Ensuring activity of the Doctoral School's supervisors	Continuous monitoring of the supervisors' professional suitability based on the MTMT2 database.	100 × Annual Publication Credits / 48	The minimum requirement of 48 credits corresponds to 100%: at least two papers presented at a recognized international conference

1.3.2. Fulfillment of supervisor-related objectives

To measure the fulfillment of the supervisor-related objectives, we examined the supervisors' publication performance based on public data available in the MTMT database, in the form of credit point calculations for the year 2025. The credit points and the resulting indicator values are presented in the table provided in a separate appendix.

In light of the results obtained, it can be stated that the achievement of supervisor-related objectives is not comprehensive. While some supervisors significantly exceed the indicator value, others fall substantially short. Although the average remains above 100%, at 129%, the dispersion is very high at 132%. The situation is nuanced by the fact that several supervisors also hold leadership positions in various organizational units of the University; thus, the time allocable to research is often very limited. Another factor to consider is that the indicators for supervisors (48 credit points) are higher than those for core members (36 credit points) or instructors (24 credit points). Consequently, the Doctoral School has concluded that supervisory publication performance is an area requiring intervention.

1.4. Additional publication objectives for core members

1.4.1. Criteria for core member-related additional publication objectives

Achieving higher values is highly encouraged. Core members are subject to complex sets of expectations. Although their compliance criteria are defined in five-year windows, we aim to incentivize our core members to maintain 'consistent performance,' which significantly reduces the risk of potential attrition due to unforeseen issues. Our objective is for every core member

to publish at least one article annually in a Q1, Q2, or at least a Q3-rated journal. The proposed additional objective seeks to ensure the consistency of the core members' publication output.

Strategic Objective / Task	Quality Objective	Indicator	Remarks
Ensuring the consistency of core members' publication activity	The attrition of core members can be prevented if they produce at least one publication in a major international journal every single year.	100 × Annual Publication Credits / 36	The minimum requirement of 36 credits corresponds to 100%: the production of at least one publication in a recognized international journal annually.

1.4.2. Fulfillment of core member-related additional publication objectives

To measure the fulfillment of the core member-related additional publication objectives, we examined the supervisors' publication performance based on public data available in the MTMT database, in the form of credit point calculations for the year 2025. The credit points and the resulting indicator values are presented in the table provided in a separate appendix.

Based on the data, it can be stated that in 2025, 2 out of the 12 core members remained below the 100% threshold; with one exception, the extent of this shortfall was minor. The average is 230%, with several core members exceeding the indicator by two, three, or even seven times the required amount.

1.5. Strategic objectives characterizing the overall operation of the Doctoral School

1.5.1. Criteria for the strategic objectives characterizing the overall operation of the Doctoral School

Cumulative data is primarily significant in tracking the individual progress of students. To exclude the compounding effects of 'memory' inherent in historical data, the overall operation of the Doctoral School is best characterized by averages calculated over one semester or one-year 'rolling windows.' These figures naturally incorporate the effects of previous periods without double-counting them.

Strategic Objective / Task	Quality Objective	Indicator	Remarks
Measuring the success rate of complex exams conducted in the given year.	Reducing student attrition rates during the annual comprehensive examinations.	100 × Number of Successful Complex Examinees per Annum / Total Number of Complex Examinees per Annum	The maximum possible value of 100% represents the quality objective, while the value actually achieved constitutes the

			qualifying data.
Measuring the success rate of research reports in the given semester.	Increasing the success rate of end-of-semester research reports.	100 × Number of Successful Research Reports / Total Number of Students Required to Submit a Research Report	The maximum possible value of 100% represents the quality objective, while the value actually achieved constitutes the qualifying data.
Measuring the success rate of workshop / workplace debates in the given year.	Increasing the success rate of workshop / workplace debates.	100 × Number of Successful Workshop or Workplace Debates per Annum / Total Number of Workshop or Workplace Debates per Annum	The maximum possible value of 100% represents the quality objective, while the value actually achieved constitutes the qualifying data.
Measuring the success rate of public defences in the given year.	Increasing the success rate of public defences.	100 × Number of Successful Public Defences per Annum / Total Number of Public Defences per Annum	The maximum possible value of 100% represents the quality objective, while the value actually achieved constitutes the qualifying data.

1.5.2. Fulfillment of the strategic objectives characterizing the overall operation of the Doctoral School

Measuring the success rate of complex examinations completed in the given semester, assessing the success of research reports in the given semester, and measuring the proportion of successful workshop / workplace debates conducted in the given year

	Complex Exams (organized training)	Research Reports	Workshop / Workplace debate
2024/2025/1	4	61 (out of 62)	3
2024/2025/2	6	58 (out of 59)	4

Measuring the proportion of successful public doctoral defences conducted in the given year

The data are available on the website of the Hungarian Doctoral Council. During the two semesters of the 2024/2025 academic year, a total of 9 public defences took place, with all doctoral candidates successfully obtaining their degrees. The data regarding the defences are provided in a table in a separate appendix.

2. Analysis of the Number of Doctoral Students

No.	Aspect evaluated (persons)		2024/2025, Semester I.	2024/2025, Semester II.
1.	Applicants		General admission procedure: 29	General admission procedure: **10**
			Stipendium Hungaricum: 16	
			Total: **45**	
2.	Admitted applicants		Hungarian, state-funded students enrolling for their first semester: 13	Hungarian, state-funded students enrolling for their first semester: 6
			Stipendium Hungaricum students enrolling for their first semester: 3	Part-time, fee-paying students enrolling for their first semester: 2
			Part-time, fee-paying students enrolling for their first semester: 6	Conditionally admitted individual preparation students: 1
			Conditionally admitted individual preparation students: 6	Total: 9
				New students transferring from another OE doctoral school: 2
				(Outgoing internal transfers to other OE doctoral schools: 5)
3.	Enrolled	Full-time (state-funded)	Hungarian, state-funded students: 40	Hungarian, state-funded students: 39
			Stipendium Hungaricum students: 12	Stipendium Hungaricum students: 13
			Total full-time students: **52**	Total full-time students: **52**
		Part-time (fee-paying)	**19**	**19**
4.	Applicants for individual preparation		New students: 7	New student: 1

		Total individual preparation students who have not yet initiated the degree acquisition procedure: **13**	Total individual preparation students who have not yet initiated the degree acquisition procedure: **12**
5.	Passed the complex exam	4 (organized training)	6 (organized training)
		8 (individual preparation)	1 (individual preparation)
6.	Obtained the pre-degree certificate (absolutorium)	**4**	**9**
7.	Workshop / workplace debates	**3**	**4**
8.	Obtained a PhD degree	**4**	**5**
9.	Mobility program participants	**0**	**3**
10.	Passive	**4**	**5**
11.	Funding status transfers	**0**	**0**
12.	Removed from the student registry	Student status terminated: **2**	Student status terminated: **2**
		Expired eligibility for dissertation submission: **1**	Expired eligibility for dissertation submission: **2**
13.	Requesting a change of supervisor	**1**	**2**
14.	Requesting a co-supervisor	**2**	**3**
15.	Failed the complex exam	**1** (individual preparation)	**0**

3. Human Resources

The AIAMDI profile on the ODT (National Doctoral Council) platform has been updated. The relevant data are also presented in the table provided in a separate appendix.

4. Complex exam takers; students requesting their pre-degree certificate (absolutorium); candidates in the degree acquisition procedure or awarded a degree in the current year; student attrition

4.1. Students Taking the Complex Exam

In the 2024/25/1 semester: 4 students in the organized program and 8 in the individual preparation track took the complex exam.
In the 2024/25/2 semester: 6 students in the organized program and 1 in the individual preparation track took the complex exam.

4.2. Students Receiving the Pre-Degree Certificate

In the 2024/25/1 semester: 4 students obtained their pre-degree certificate (absolutorium).
In the 2024/25/2 semester: 9 students obtained their pre-degree certificate (absolutorium).

4.3. Doctoral Candidates in the Degree Acquisition Procedure and Degrees Awarded

In the 2024/25/1 semester: no doctoral degree acquisition procedures were initiated, and 4 doctoral students were awarded their degrees.
In the 2024/25/2 semester: 5 doctoral degree acquisition procedures were initiated, and 5 doctoral students were awarded their degrees.

4.4. Students lost to attrition (removed from the student registry)

In the 2024/25/1 semester: 2 doctoral students had their student status terminated, and 1 doctoral candidate exceeded the time limit for initiating the degree acquisition procedure.
In the 2024/25/2 semester: 2 doctoral students had their student status terminated, and 2 doctoral candidates exceeded the time limit for initiating the degree acquisition procedure.

5. Changes in Supervisors, Involvement of Co-supervisors, and Modifications of Research Topics

In the 2024/25/1 semester, one student requested a change of supervisor, and two students requested the involvement of a co-supervisor.
In the 2024/25/2 semester, one student requested a change of supervisor, two students requested a change of both supervisor and research topic, and four students requested the involvement of a co-supervisor.
The table containing the details of these requests is included in a separate appendix.

6. Habilitation Procedures and their Outcomes

6.1. Initiated Habilitation Procedures

Semester 2024/25/1: 1 habilitation procedure was initiated.
Semester 2024/25/2: 4 habilitation procedures were initiated.

6.2. Successful Habilitations

Semester 2024/25/1: 4 successful habilitations.
Semester 2024/25/2: 1 successful habilitation.
Out of the habilitation procedures initiated during the 2024/2025 academic year, three were not concluded by the end of the year. Detailed data regarding the habilitation procedures and successful qualifications are provided in the table in a separate appendix.

7. PhD Student Well-being Measures

In order to ensure that students receive comprehensive information and a supportive background at the start of their studies, the Applied Informatics and Applied Mathematics Doctoral School (hereinafter: AIAMDI) has launched a series of **orientation sessions for first-year doctoral students**.

The first such orientation session, held in a hybrid format, was organized for students starting in the Spring semester of the 2024-2025 academic year. Following the *introduction of the Doctoral School staff*, the students – present both in person and online – introduced themselves, sharing their educational backgrounds, research topics, and goals for their doctoral studies. Subsequently, students received a *presentation covering the following thematic areas:*

- structure of the doctoral program,
- credits to be completed,
- courses available in the current semester,
- required soft skill competencies,
- curriculum and expected publication scientometric levels based on the date of entry,
- Hungarian Scientific Bibliography (MTMT),
- end-of-semester research report,
- complex exam,
- degree acquisition procedure,
- dissertation review process,
- research-related information (Open Access support, travel grants, Acta Polytechnica Hungarica),
- international conferences,
- doctoral seminars.

The presentation was made available to all students. At the end of the session (and throughout the presentation as questions arose), students had *the opportunity to ask individual questions*, which many took advantage of. Feedback from the students was unanimously positive; they found the overview of topics, as well as the opportunity to meet the Doctoral School staff and their fellow peers, to be a useful and essential form of support.

8. Student publication performance based on the MTMT database

In accordance with its Training Plan, the AIAMDI has assigned an indicator to measure students' publication progress. The *recommended cumulative publication credit* indicator represents the progress suggested by the Doctoral School; it serves as a guideline for students to schedule their publication activities, taking into account the specificities of each semester (e.g., the complex exam in the 4th semester). Accordingly, failure to meet the indicator on a semester-by-semester basis does not carry any punitive consequences; however, the minimum requirement of 75 publication credits must be completed by the end of the 8th semester.

To measure student publication performance, we analyzed the progress of total publication credits in relation to the recommended cumulative publication credits and the total required credits for the autumn and spring semesters of the 2024-2025 academic year. The results (depersonalized) are presented in the table below. The findings indicate that most students are progressing in line with the indicator; in several cases, students have achieved 300% or even 400% of the target. During the period under review, there was only one student in their 8th semester who did not possess the required amount of credits.

Academic Year / Semester	No. of Active Semesters	Cumulative Publication Credits	Recommended Cumulative Publication Credits	Completion % **Relative to the Recommended Cumulative Publication Credits for the Semester**	Completion % **Relative to the Minimum 75 Total Publication Credits** to be Earned
2024/25/1	1	0	-	-	0,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	30	-	-	40,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	24	-	-	32,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	18	-	-	24,00
2024/25/1	1	12	-	-	16,00
2024/25/1	1	24	-	-	32,00

2024/25/1	1	0	-	-	0,00
2024/25/1	1	15	-	-	20,00
2024/25/1	1	24	-	-	32,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	27	-	-	36,00
2024/25/1	1	0	-	-	0,00
2024/25/1	1	0	-	-	0,00
2024/25/1	2	52	10	520	69,33
2024/25/1	2	0	10	0	0,00
2024/25/1	2	24	10	240	32,00
2024/25/1	2	0	10	0	0,00
2024/25/1	3	66	25	264	88,00
2024/25/1	3	24	25	96	32,00
2024/25/1	3	70	25	280	93,33
2024/25/1	3	36	25	144	48,00
2024/25/1	3	155	25	620	206,67
2024/25/1	3	7	25	28	9,33
2024/25/1	3	48	25	192	64,00
2024/25/1	4	58	25	232	77,33
2024/25/1	4	137	25	548	182,67
2024/25/1	4	32	25	128	42,67
2024/25/1	passive	passive	passive	passive	passive
2024/25/1	passive	passive	passive	passive	passive
2024/25/1	4	69	25	276	92,00
2024/25/1	5	229	40	572,5	305,33
2024/25/1	5	60	40	150	80,00
2024/25/1	5	80	40	200	106,67
2024/25/1	5	120	40	300	160,00
2024/25/1	5	84	40	210	112,00
2024/25/1	5	128	40	320	170,67
2024/25/1	5	132	40	330	176,00
2024/25/1	5	75	40	187,5	100,00
2024/25/1	5	39	40	97,5	52,00
2024/25/1	5	41	40	102,5	54,67
2024/25/1	6	239	50	478	318,67
2024/25/1	6	57	50	114	76,00
2024/25/1	6	98	50	196	130,67
2024/25/1	6	124	50	248	165,33
2024/25/1	6	72	50	144	96,00
2024/25/1	6	108	50	216	144,00
2024/25/1	7	236	65	363	315
2024/25/1	7	173	65	266	231
2024/25/1	7	185	65	285	247

2024/25/1	7	72	65	111	96
2024/25/1	7	186	65	286	248
2024/25/1	7	324	65	498	432
2024/25/1	passive	passive	passive	passive	passive
2024/25/1	7	30	65	46	40
2024/25/1	7	60	65	92	80
2024/25/1	7	398	65	612	531
2024/25/1	8	227	75	303	303
2024/25/1	8	294	75	392	392
2024/25/1	8	34	75	45	45
2024/25/1	passive	passive	passive	passive	passive
2024/25/1	8	155	75	207	207

9. Partnerships

No.	Name and seat of the cooperating partner organization	Nature of cooperation (partner institution, research organization, business-industrial organization, other)	Subject of cooperation (educational, examination board, research, expert, advisory, project, other activity)	Frequency of cooperation (occasional, continuous)	Remarks
1.	John von Neumann Computer Society (Hungary)	Professional association	Research-related: establishing a professional forum	continuous	Long-term, ongoing collaboration
2.	IEEE SMC Society (USA)	Professional association	Research-related: conference organization	continuous	Long-term, ongoing collaboration
3.	Hungarian Fuzzy Association (Hungary)	Professional association	Research-related: conference organization	continuous	Long-term, ongoing collaboration
4.	Università degli Studi di Milano (Italy)	Research organization / University	Research-related: launching a joint PhD program	continuous	Long-standing but inactive collaboration Dual Ph.D. Degree's Program between Obuda University and Università degli Studi di Milano
5.	Genoa University (Italy)		Research-related:	continuous	Long-standing but inactive cooperation

		Research organization / University	launching a joint PhD program		*Strategic Engineering International PhD Program* The aim of establishing the international doctoral program is for high-quality universities specializing in strategic engineering disciplines to create points of connection and develop close cooperation with leading institutions, agencies, and centers of excellence (e.g., the NATO M&S Center of Excellence, the Water Academy) that are interested in the benefits of related research, development, capabilities, skills, and professionals.
6.	University of Defence (Czech Republic)	Research organization / University	Research-related: launching a joint PhD program	continuous	
7.	Universidad de la Rioja (Spain)	Research organization / University	Research-related: launching a joint PhD program	continuous	
8.	École des Mines d'Alès (France)	Research organization / University	Research-related: launching a joint PhD program	continuous	
9.	Wroclaw University of Technology (Poland)	Research organization / University	Research-related: launching a joint PhD program	continuous	
10.	Old Dominion University (USA)	Research organization / University	Research-related: launching a joint PhD program	continuous	
11.	Politehnica University of Timişoara (Romania)	Research organization / University	Research-related: conference organization	occasional	The AIAMDI organized the *'Special Session on PhD Student Research in Applied Informatics and Numerical Mathematics'* at the IEEE 19th International Symposium on Applied Computational Intelligence and Informatics (SACI 2025). The conference was held between May 19 and 24, 2025, in Budapest, Hungary, and Timișoara, Romania.
12.	IEEE Chapter of SMC (Romania)	Research organization / University	Research-related: conference organization	occasional	
	L-Università ta' Malta – UM (Malta)		Educational: launching a	occasional	In the framework of international cooperation, a 12-

13.		Research organization / University	joint seminar series		week seminar series was established, featuring weekly lectures of approximately 60–75 minutes delivered by a total of 12 professors from the four participating universities (the fourth participant being OE). The course was available to AIAMDI students under the title '2025 International Seminar Series on Emerging Technologies in Cyber-Physical Systems (CPS). Speakers and detailed curriculum: https://nik.uni-obuda.hu/2025-international-seminar-series-on-emerging-technologies-in-cyber-physical-systems-cps/
14.	Nottingham Trent University – NTU (UK)	Research organization / University	Educational: launching a joint seminar series	occasional	
15.	Instituto Superior Técnico – IST (Lisboa)	Research organization / University	Educational: launching a joint seminar series	occasional	

10. Review of infrastructure and website content (Hungarian-English)

Measures taken regarding the AIAMDI website during the reporting period:

- Section 3, Paragraph (5) has been added to Chapter II ('Structure of the Doctoral School') of the Operational Regulations of the Applied Informatics and Applied Mathematics Doctoral School, defining the tasks and powers of the program directors. Information regarding this update has also been published on the website of the Doctoral School. (https://aiamdi.uni-obuda.hu/alprogramok/)
- The collaboration agreements of the Doctoral School are accessible on the website via the 'International Collaborations' submenu. (https://aiamdi.uni-obuda.hu/nemzetkozi-egyuttmukodesek/).
- The list of Council members and their positions is publicly available in both Hungarian and English. (Doktori Iskola Tanácsa, Council of the Doctoral School).
- The decisions of the Council of the Doctoral School Council are also available in English on the website. (https://aiamdi.uni-obuda.hu/hatarozatok/, https://aiamdi.uni-obuda.hu/en/decisions/).
- Contact information is available on the website in both Hungarian and English (https://aiamdi.uni-obuda.hu/kapcsolat/, https://aiamdi.uni-obuda.hu/en/contact/).
- The Call for Applications for the second semester of the 2024-2025 academic year has been updated. In the Hungarian procedure, the application periods, deadlines, and

planned enrollment numbers were specified. The English version of the call was also updated to include the application periods and deadlines, the scoring criteria, planned enrollment numbers, and the tuition fee amounts.

In addition, the AIAMDI participated in planning the professional content of the unified OE Doctoral School websites. Based on consultations between the leadership of the Doctoral Schools, the unified website content of the Doctoral Schools will follow the structure below:

- INTRODUCTION menu
  - Human and organizational overview
    - Welcome message from the Head of the Doctoral School
    - Management of the Doctoral School (Head, Deputy Head, Secretary)
    - Core members
    - Council of the Doctoral School
    - Lecturers and Supervisors
    - Doctoral School Administration
    - University Doctoral and Habilitation Office
    - Doctoral Student Council (DÖK)
  - About us
    - Core activities of the Doctoral School
    - Scientific mission
    - Current research topics
    - General statistical indicators
    - Other achievements
  - Partnerships and Collaborations
  - Alumni
- APPLICANTS menu
  - Programme information
    - Aim and Level of the programme (ISCED 8)
    - Study formats, language, funding forms, scholarships, tuition fees, cooperative programme, individual preparation
    - Curriculum structure / training plan
    - Research topic selection guide and rules
    - Research topics
    - Research plan
  - Admission information
    - Call for applications
    - General admission information
    - Application form
  - Submission of application documents (link)
- STUDENTS menu
  - Starting studies
    - Enrolment
    - Student ID
    - PhD guide
  - Training and research phase (semesters 1–4)
    - Curriculum structure / training plan
    - Annual academic calendar

    - Registration
    - Subjects (descriptions organized into a unified template)
    - Course registration
    - Requests
    - Exams
    - Language requirements
    - Research reports
    - Complex exam
  - Research and dissertation phase (semesters 5–8)
    - Absolutorium
    - Degree procedure
    - Workshop / workplace debate
    - Defense
  - Annual academic calendar
  - Operation of the Doctoral Student Council
  - Library
  - Dissertations
  - Calls
    - Scholarships (e.g. EKÖP, etc.)
    - Mobility programmes
    - Cooperative programme
    - Others
- HABILITATION menu
  - Description and requirements of the habilitation procedure
  - Habilitation procedure forms
- DOCUMENTS menu
  - University Doctoral and Habilitation Regulations
  - Doctoral School of Applied Informatics and Applied Mathematics – Operational Regulations
  - Doctoral School of Applied Informatics and Applied Mathematics – Operational Plan
  - Doctoral Training Quality Assurance Plan
  - OE Student Requirements System (HKR)
  - OE Doctoral Student Council Rules
  - OE Code of Ethics
  - OE Privacy Policy
  - Forms for the doctoral degree acquisition process
  - Habilitation procedure forms
  - Archive Documents
    - University Doctoral and Habilitation Regulations
    - Doctoral School Operational Regulations
    - Doctoral School Operational Plan
    - Quality Assurance Plan
  - Accreditation documents (Hungarian Accreditation Committee reports, HAC decisions since establishment)
  - Legal framework (National Higher Education Act, Government Decree on Doctoral Programmes)

  - ESG
- OPERATIONS menu
  - University Doctoral and Habilitation Council (decisions)
  - Council of the Doctoral School (decisions)
  - University Doctoral and Habilitation Office (information)
  - Quality Assurance
    - Obuda University Quality policy
    - Quality Assurance Plan
    - Flowchart of the Quality Assurance System
    - Quality Objectives
    - Doctoral School Annual Performance Evaluation Report
- EVENTS menu
  - Event calendar
  - Admission announcement
  - Invitation to PhD workshop / workplace debate
  - Invitation to PhD dissertation defense
  - Invitation to habilitation procedure
  - Invitation to PhD progress report event
  - Invitations to other University events
  - Invitations to other national events
  - Invitations to other international events
- CONTACT – On the bottom of the main page: address, phone, email, office hours, administrators
- NEWS – Continuously updated content on the main page.

The English website will feature all the information available on the Hungarian site.

11. Evaluation of events, programs, doctoral conferences, and workshops organized by the Doctoral School

The Ministry of Culture and Innovation, through the National Research, Development and Innovation Office, has announced the 2024 University Research Scholarship Program (EKÖP-2024), funded by the National Research, Development and Innovation Fund.

Obuda University organized the 2024 University Research Scholarship Program (EKÖP) Conference between July 8–10, 2025 (https://palyazat.uni-obuda.hu/2024-ekop-konferencia/). The aim of the event was to showcase the research findings of students, doctoral candidates, young researchers, and participants of the Cooperative Doctoral Programme supported under the scheme. The event—organized by Grants and Projects Office—was held entirely online via the Microsoft Teams platform.

The title of the conference's 6th session was "Artificial Intelligence and Digital Medical Technology." In this session, doctoral students from the Doctoral School of Applied Informatics and Applied Mathematics participating in the University Research Scholarship Program presented their research. A total of 9 presentations were delivered; for the most part, the students adhered well to their allotted time slots, allowing sufficient time for discussion

following the presentations. This was only omitted in a few cases due to imprecise timekeeping.

The session was opened and chaired by Dr. habil. Johanna Sájevicsné Sápi, Session Chair and Deputy Head of the AIAMDI. The session was also honored by the presence of Prof. Dr. Gyula Simon, Head of the AIAMDI, who joined from among the audience.

The first presenter was **Borbála Gergics**, supervised by Dr. Dániel András Drexler. Her presentation was titled *'Modeling of tumor spheroid co-cultures'*. The research aims to develop a three-dimensional in vitro tumor model (tumor spheroid co-culture) and an associated mathematical method that can facilitate the determination of biological parameters required for therapy optimization.

The second presenter was **Gyula Ádám Nemes**, supervised by Dr. habil. György Eigner, Dean. The title of his presentation *was 'Processing EEG signals using machine learning'*. The research aimed to improve the reliability and accuracy of EEG-based brain-computer interfaces (BCI) regarding motor execution and motor imagery paradigms, utilizing affordable and portable devices.

The third presenter of the session was **Melánia Pamuki-Puskás**, supervised by Dr. Dániel András Drexler. Her presentation was titled *'Development of a parameter estimation procedure based on mixed-effects models for physiological processes'*. The research aims to develop a parameter estimation procedure based on non-linear mixed-effects (NLME) models, which enables the simulation of personalized chemotherapy treatment regimens for cancer patients.

The fourth presenter was **Bence Varga**, supervised by Dr. Richárd Horváth. The title of his presentation was *'Application of the Wegstein Method in Fixed-Point Iteration-Based Adaptive Control'*. The research aims to investigate new convergence acceleration methods for Fixed-Point Iteration-based (FPI) adaptive control; the presentation demonstrated the applicability of the Wegstein method, which requires only a single iterative step to increase the speed of convergence.

The final presenter before the break was **Zoltán Varga**, supervised by Prof. Dr. Ervin Rácz. His presentation was titled *'Efficiency Prediction of Dye-Sensitized Solar Cells for the Improvement of Manufacturing Technologies Using Machine Learning Techniques'*. The research aims to systematically collect manufacturing technology results from literature regarding Dye-Sensitized Solar Cells (DSSC) and to create a parameterized database, which serves as the foundation for developing a machine learning-based prediction model to forecast cell efficiency.

The first presenter after the break was **Miklós Vincze**, supervised by Prof. Dr. Miklós Kozlovszky. The title of his presentation was *'Native Resolution 3D Visualization and Quality Assurance of the Evaluation of Digitized Pathological Samples*'. The research aims, on one hand, to create a solution that allows for the 3D visualization of data from various medical imaging modalities at their full resolution; and on the other hand, to establish quality assurance for the evaluation of 3D medical image data.

The seventh presenter was **Mera Sulaiman**, supervised by Prof. Dr. Miklós Kozlovszky. The title of her presentation, held in English, was *'Automotive Cybersecurity'*. The research aims to automate the process of attack path analysis and risk assessment within the Threat Analysis and Risk Assessment (TARA) process of automotive systems, with the goal of replacing the current manual approaches.

The eighth presenter was **Mohammadreza Azodinia**, supervised by Dr. Amir Mosavi. The title of his presentation, held in English, was '*Computational Materials Design Innovations with Machine Learning'*. The research aims to develop an AI-driven intelligent maintenance system for road and infrastructure management by developing an AI-based Structural Health Monitoring (SHM) model for pavements.

The final presenter was Mark Bence Szigeti, supervised by Prof. Dr. Levente Kovács, Rector. The title of his presentation was *'The Use of Artificial Intelligence in Technology Transfer Processes'*. The research aims to investigate the extent to which the latest Large Language Models (LLMs) are suitable for assessing the psychological burdens of patients living with diabetes, specifically focusing on the evaluation of diabetes distress.

The session concluded with a Mentimeter segment, where presenters could share their opinions regarding the session and the conference; based on the feedback, both the session and the conference were deemed useful and interesting.

The closing remarks of the session and the second day of the conference were shared with the audience by Dr. István Szabó, Head of the Talent Management Office.

12. Financial Performance

The total amount of financial support provided by AIAMDI to doctoral students in the 2024-2025 academic year was HUF 14,114,486. This consists of two components: conference support (covering either registration fees only or travel and accommodation costs as well) and Article Processing Charges (APCs) for publications. The table available in the appendix provides a detailed breakdown of the support granted, categorized by type, specifying the relevant conferences and journals.

The total revenue of AIAMDI in the 2024-2025 academic year amounted to HUF 1,189,000. This income was generated exclusively from procedural fees, the details of which are provided in the table available in the separate appendix.

13. Action Plan

AIAMDI developed its action plan based on the Objectives and Key Results (OKR) methodology. OKR is an organizational performance management framework whose primary goal is to establish coherence between strategic directions and daily operational activities. The foundation of OKR consists of qualitative, inspirational Objectives, paired with quantitatively measurable Key Results, thereby ensuring the objective evaluation of progress. The theoretical significance of the OKR system lies in its ability to align objectives formulated at different levels of the organization (e.g., aligning the Doctoral School's Quality Assurance Plan

with the comprehensive quality goals approved by the University Doctoral and Habilitation Council), promoting transparency, accountability, and agility. From both a scientific and practical perspective, OKR can be considered a modern, adaptive form of management control systems that, unlike static performance indicators, reacts dynamically to changing environmental and market conditions.

Objective	Key Result	Responsible Person	Deadline
O1: Standardization of the supervisor-related objective achievements	**O1KR1**: Reducing the variance in supervisor publication performance from 132% to below 90% (outliers exceeding triple the required target may be excluded from the calculation).	dr. habil. Johanna Sájevicsné Sápi	Up to the 2025-2026 annual performance evaluation report
	O1KR2: Increasing the minimum supervisor publication performance from 0% to 25%.	dr. habil. Johanna Sájevicsné Sápi	Up to the 2025-2026 annual performance evaluation report
O2: Standardization of the faculty-related objective achievements	**O2KR1**: Reducing the variance in faculty publication performance from 234% to below 100% (outliers exceeding triple the required target may be excluded from the calculation).	dr. habil. Johanna Sájevicsné Sápi	Up to the 2025-2026 annual performance evaluation report
	O2KR2: Increasing the minimum faculty publication performance from 0% to 25%.	dr. habil. Johanna Sájevicsné Sápi	Up to the 2025-2026 annual performance evaluation report
O3: Surveying the needs and satisfaction of PhD students	**O3KR1**: Development of a questionnaire for surveying PhD student needs and satisfaction	Júlia Nagy	Up to the 2025-2026 annual performance evaluation report
	O3KR2: Analysis of the questionnaire results on doctoral student needs and satisfaction.	Júlia Nagy	Up to the 2025-2026 annual performance evaluation report
O4: Expansion of partnerships	**O4KR1**: Review of existing partnerships. terminating or renewing inactive collaborations.	Prof. Dr. Gyula Simon	Up to the 2025-2026 annual performance evaluation report
	O4KR2: Establishing 1 new international and 2 new domestic partnerships.	Prof. Dr. Gyula Simon	Up to the 2025-2026 annual performance evaluation report
O5: Development of an Alumni system	**O5KR1**: Establishment of a PhD Career Tracking System	Zsuzsanna Bácskai	Up to the 2025-2026 annual performance evaluation report
	O5KR2: Organization of 1 Alumni reunion.	Zsuzsanna Bácskai	Up to the 2025-2026 annual

			performance evaluation report

Date of issue: October 10, 2025
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