



HOTĂRÂRE

privind validarea rezultatelor procedurilor de evaluare externă a calității educației

Având în vedere prevederile generale și specifice aferente proceselor sau procedurilor privind:

- **evaluarea externă a calității și validarea rezultatelor cuprinse în Rapoartele de evaluare externă:** art. 223-226, art. 229-230 și art. 249 alin. (1) lit. f), g) și h) din Legea nr. 199/2023 a învățământului superior nr. 199/2023, cu modificările și completările ulterioare, denumită în continuare Legea, precum și în Metodologia de evaluare externă a calității educației în învățământul superior, aprobată prin Hotărârea Guvernului nr. 962/2024, cu modificările și completările ulterioare, denumită în continuare Metodologia;
- **autorizarea de funcționare provizorie pentru programele de studii universitare din ciclul I de licență:** art. 235 alin. (1) lit. a) și lit. b) pct. (ii), alin. (2)-(5) și art. 236 alin. (1)-(2) din Lege; art. 27, art. 29 și art. 32-33, coroborate cu art. 59, art. 62 și art. 63 din Metodologie;
- **autorizarea pentru domeniile de studii universitare din ciclul II de masterat:** art. 235 alin. (1) lit. a) și lit. b) pct. (iii), alin. (2)-(5) și art. 236 alin. (1)-(2) din Lege; art. 27-29 și art. 34-35, coroborate cu art. 59, art. 62 și art. 63 din Metodologie;
- **autorizarea pentru domeniile de studii universitare din ciclul III de doctorat:** art. 235 alin. (1) lit. b) pct. (iv), alin. (2)-(5) și art. 236 alin. (1) și (3) din Lege; art. 27-29 și art. 37-38, coroborate cu art. 59, art. 62 și art. 63 din Metodologie;
- **acreditarea pentru programele de studii universitare din ciclul I de licență:** art. 239 alin. (1) lit. b) și alin. (6)-(7), art. 240 alin. (1) din Lege; art. 39-40 și art. 42, coroborate cu art. 60, art. 62 și art. 63 din Metodologie;
- **acreditarea pentru domeniile de studii universitare din ciclul II de masterat:** art. 239 alin. (3) și alin. (6)-(7), art. 240 alin. (1) din Lege; art. 39-40 și art. 43-44, coroborate cu art. 60, art. 62 și art. 63 din Metodologie;
- **acreditarea pentru domeniile de studii universitare din ciclul III de doctorat:** art. 239 alin. (4) și alin. (6)-(7), art. 240 alin. (2) din Lege; art. 39-40 și art. 46-47, coroborate cu art. 60, art. 62 și art. 63 din Metodologie;
- **analiza și validarea în vederea verificării respectării Metodologiei, de către comisiile de experți evaluatori în cadrul rapoartelor de evaluare externă:** art. 235 alin. (4), pentru autorizare, respectiv art. 239 alin. (6) lit. d), pentru acreditare și menținerea acreditării, din Lege, precum și art. 62-63 din Metodologie.

Luând în considerare:

a. Ghidul aplicabil programelor de studii universitare de licență, aprobat prin Hotărârea Consiliului ARACIS nr. 42/06.02.2025, cu modificările și completările ulterioare;



b. Ghidul aplicabil domeniilor de studii universitare de masterat, aprobat prin Hotărârea Consiliului ARACIS nr. 83/03.04.2025;

c. Ghidul aplicabil domeniilor de studii universitare de doctorat, aprobat prin Hotărârea Consiliului ARACIS nr. 84/03.04.2025;

Întrucât Consiliul ARACIS validează, prin vot deschis și pe baza verificării respectării Metodologiei, propunerile formulate de către comisiile de experți evaluatori și poate solicita refacerea Rapoartelor de evaluare externă atunci când constată că Metodologia nu a fost respectată ori respectivele rapoarte nu cuprind suficiente date și dovezi pentru adoptarea deciziei,

Ținând seama de considerentele Consiliului aferente validării rezultatelor individualizate în procesele verbale de ședință, al căror format a fost aprobat prin Hotărârea Consiliului nr. 170/H/03.07.2025,

În temeiul art. 258 alin. (1) din Lege și al art. 62 alin. (1) și (2) din Metodologie, precum și al art. 7 alin. (1) și alin. (3) lit. b) și h), art. 11 alin. (1) și al art. 23 alin. (5) din Regulamentul de organizare și funcționare al ARACIS, aprobat prin Hotărârea Consiliului ARACIS nr. 188/H/27.06.2024 și completat prin Hotărârea nr. 116/H/02.04.2026,

Consiliul Agenției Române de Asigurare a Calității în Învățământul Superior HOTĂRĂȘTE:

Art. 1. (1) Se validează rezultatele procedurilor de evaluare externă a calității educației pentru programele de studii universitare de licență, domeniile de studii universitare de masterat și de doctorat, precum și pentru programul pregătitor de limba română pentru cetățenii străini, după caz, cuprinse în anexele nr. 1-13 care fac parte integrantă din prezenta hotărâre.

(2) Pentru fiecare dintre programele sau domeniile de studii universitare, anexa corespunzătoare indică, conform art. 230 alin. (2) și alin. (3) lit. b), c) și d), art. 231 lit. a) și b), art. 232 lit. c), d) și e), art. 235 alin. (1) lit. b), punctele ii-iv, alin. (3)-(5), art. 239 alin. (1) lit. b), alin. (3), (4), (6) lit. a)-d) din Lege, procesul sau procedura de evaluare parcursă, rezultatele din Raportul de evaluare externă care se validează, precum și considerentele analizei de validitate și concluzia motivată a Consiliului.

(3) Rezultatele prevăzute la alin. (1) se comunică Ministerului Educației și Cercetării și instituțiilor solicitante și se publică pe site-ul ARACIS.

Art. 2. Analiza de validitate se exercită în limitele art. 235 alin. (4), respectiv ale art. 239 alin. (6) lit. d) din Lege și ale art. 62 raportat la art. 63 din Metodologie.

Art. 3. Rapoartele de evaluare externă, inclusiv numele experților, se publică integral pe site-ul ARACIS, în condițiile art. 229 alin. (2) din Lege și ale art. 62 alin. (3) din Metodologie.



Art. 4. Prezenta hotărâre intră în vigoare la data de 17.09.2026.

Art. 5. Prezenta hotărâre va fi dusă la îndeplinire de Direcția Asigurarea Calității și de Compartimentul Tehnologia Informației.

Prof. univ. dr. ing. Cristian-Vasile DOICIN
Președinte

Daniela Cristina GHIȚULICĂ
Director general

Carmen MIRIAN
Director Direcția Asigurarea Calității

Cristina-Vasilica ICOCIU
Director Direcția Juridică, Cooperare, Comunicare și Formare
Consilier juridic

NR. 286/H/17.09.2026



AGENȚIA ROMÂNĂ DE ASIGURARE A CALITĂȚII ÎN ÎNVĂȚĂMÂNTUL SUPERIOR

Membră în Asociația Europeană pentru Asigurarea Calității în Învățământul Superior - ENQA

Înscrisă în Registrul European pentru Asigurarea Calității în Învățământul Superior - EQAR

ANEXA NR. 1

Hotărârea Consiliului ARACIS nr. 286/H/17.09.2026

Anexa 1.1

DATE DE IDENTIFICARE		
Instituția de învățământ superior/organizația furnizoare de educație	Universitatea Tehnică din Cluj-Napoca	
Școala(ile) doctorală(e)	Școala Doctorală UTCN	
Domeniul de studii universitare de doctorat (DSUD)	Matematică	
Procedura/procesul de evaluare externă a calității educației	Menținerea acreditării	
DECIZIA		
Descrierea pe scurt a procesului de luare a deciziei		
Raportul de evaluare externă (REE) a fost analizat în ședința Comisiei permanente de specialitate Științe Exacte și Științe ale Naturii (CPS_C1) din 07.09.2026, propunerea de decizie fiind consemnată în PV nr. 4558/07.09.2026. Propunerea de decizie a fost analizată de către Departamentul de evaluare Studii Universitare (DESU), opinia DESU fiind consemnată în PV nr. 4655/17.09.2026.		
Gradul de îndeplinire a standardelor și indicatorilor de performanță și motivarea deciziei		
Domeniul	Standarde Î / N	Indicatori de performanță Î / PÎ / N
A	Î: S.A.1.1, S.A.1.2., S.A.2.1., S.A.2.2., S.A.3.1., S.A.3.2., S.A.4.1. N: 0	Î: I.P.A.1.1.1, I.P.A.1.2.1, I.P.A.2.1.1, I.P.A.2.2.1, I.P.A.3.1.1, I.P.A.3.1.2, I.P.A.3.2.1, I.P.A.4.1.1 PÎ: 0 N: 0
B	Î: S.B.1.1., S.B.2.1., S.B.3.1., S.B.3.2., S.B.4.1., S.B.5.1., S.B.7.1., S.B.7.2., S.B.8.1., S.B.9.1., S.B.9.2. N: 0	Î: I.P.B.1.1.1., I.P.B.2.1.2, I.P.B.3.1.1, I.P.B.3.1.2, I.P.B.3.2.1, I.P.B.4.1.1., I.P.B.5.1.1, I.P.B.5.1.2, I.P.B.7.1.1, I.P.B.7.1.2, I.P.B.7.2.1, I.P.B.8.1.1, I.P.B.9.1.1, I.P.B.9.2.1 PÎ: 0 N: 0
C	Î: S.C.1.1, S.C.1.2, S.C.2.2., S.C.3.1, S.C.4.1., S.C.5.1., S.C.6.1., S.C.8.1 N: 0	Î: I.P.C.1.1.1, I.P.C.1.2.1, I.P.C.2.2.2, I.P.C.3.1.1, I.P.C.3.1.2, I.P.C.4.1.1., I.P.C.5.1.1, I.P.C.6.1.1, I.P.C.6.1.2, I.P.C.8.1.1 PÎ: 0 N: 0
Motivarea deciziei		
Consiliul ARACIS în ședința din 17.09.2026. analizează și validează propunerea comisiei de experți în evaluarea externă a calității, constatând că din: 36 indicatori: 36 sunt îndepliniți, 0 parțial îndeplinit și 0 neîndeplinit 26 standarde: 26 sunt îndeplinite, 0 neîndeplinite, și, astfel, prin aplicarea art. 63 din Metodologie decide că standardele sunt ÎNDEPLINITE.		
Decizia	Menținerea acreditării	

The Romanian Agency for Quality Assurance in Higher Education



External Evaluation Report (REE) for the procedure for obtaining a maintaining accreditation (MAC) of Doctoral Study Domain

Higher Education Institution/Education Provider Organization:	Technical University of Cluj-Napoca
Doctoral School:	UTCN Doctoral School
Doctoral Domain:	Mathematics
The objective of the external evaluation:	Maintaining accreditation (MAC)



Members of the ARACIS Evaluation Panel

No.	Last Name and First Name	Team role	Signature
1.	Lițcanu Răzvan-Dinu	Expert evaluator	
2.	Müller Winfried	International Expert	
3.	Chiriac Gabriel-Adrian	PhD Student Evaluator	

I. Introduction

- the context in which the external evaluation report was drafted (the type of evaluation, the period covered by the evaluation, membership of the external quality experts' panel, etc.);

This external evaluation report was prepared at the request of Technical University of Cluj-Napoca (UTCN), Doctoral School, for the purpose of maintaining the accreditation Mathematics Doctoral Domain. The external evaluation was conducted in accordance with legal provisions and the ARACIS Methodology. The on-site external evaluation visit took place from July 27 to 29, 2026, with the participation of all members of the external evaluation panel appointed by ARACIS, as follows:

- Prof. Răzvan-Dinu Lițcanu, Ph. D. – expert evaluator;
- Prof. Winfried Müller, Ph. D. – international expert;
- Gabriel-Adrian Chiriac – PhD student evaluator.

The internal evaluation report and the related annexes were prepared in accordance with ARACIS requirements and the national legislation applicable to higher education.

- description of the higher education institution / Romanian Academy (establishment, evolution, mission, governance, structure, study programmes/domains, external quality evaluation procedures applied);

The origin of UTCN goes back to the Industrial Institute of Higher Education founded 1920 in Cluj. This Institute was renamed to Institute of Mechanics in 1948, and then Cluj Polytechnic Institute in 1953. Finally, in 1992 the Institution was renamed as Technical University Cluj-Napoca. In 2012 UTCN merged with the North University of Baia-Mare. At present UTCN operates in Cluj-Napoca and Baia-Mare and has branches in Alba Iulia, Bistrița, Satu Mare and Zalău. UTCN is one of the 12 universities of “advanced research and education” in Romania and enjoys a high reputation in teaching and research both nationally and internationally. The mission and the objectives of the institution are defined in the University Charter, which also establishes the structure, strategy, general framework of operation and development of the institution and is applied throughout the university space. In the Technical University of Cluj-Napoca, 88 bachelor's degree programs and 100 master study programs are accredited or provisionally authorized, operating in 12 faculties (of which 9 in Cluj-Napoca and 3 at the North University Center in Baia Mare). UTCN is an Organizing Institution for Doctoral Studies (IOSUD-UTCN), with 17 doctoral domains. The Doctoral Program of Mathematics of UTCN was last evaluated by ARACIS in 2021 and accredited. In the Institutional Evaluation by ARACIS in 2023, UTCN obtained the qualification “high degree of trust”.

- general description of the doctoral study domain (why it was established - in the case of a provisional authorisation to operate; evolution and/or changes since the last external quality evaluation procedure - in the case of procedures intended for accreditation or maintaining accreditation, as applicable).

The doctoral school is headed by the director of the doctoral school and the Council of the doctoral school. At the level of doctoral fields, doctoral studies are organized in Coordination Councils of doctoral programs. They are subordinated to the Doctoral School of UTCN and their establishment is approved at the proposal of CSUD and the Doctoral School by the Board of Directors (BoD) of UTCN and the UTCN Senate.

With the merger of UTCN and the North University of Baia-Mare in 2012 the research profile of the UTCN also included foundational sciences alongside traditional engineering fields. This opened up the possibility for doctoral studies in Mathematics. Today, the PhD program Mathematics operates actively as one of the 17 fields of doctoral studies within the UTCN Doctoral School, featuring 12 doctoral supervisors guiding research in diverse fundamental and applied areas of mathematics. The supervisors have a solid reputation based on their publications in quality research journals, their participation in scientific conferences and their cooperation in research projects. Between 2021 and 2024 the field of mathematics registered 5 defended doctoral theses of high quality. However, the number of PhD students in mathematics is decreasing. In the academic year 2025/26 there were 20 active students compared with 49 students in 2021/22. There exists funding for PhD students but financial support for doctoral students is not very high. Internationalization of IOUSUD at UTCN is increasing but should be more focused and structured.

II. Methods used

- Analysed documents (internal evaluation report and its annexes; additional documents requested before and during the on-site visit, if any; other documents or data);

This report is based on the analysis of the Internal Evaluation Report (REI) of the UTCN Doctoral School Mathematics (SDM), documents concerning the legal framework for IOSUD in Romania and guidelines for the external evaluation of IOSUD provided by ARACIS, the homepage of UTCN, the supplementary documents provided by UTCN on request, the information obtained from the interviews and documents made available during the on-site visit, the visit of the buildings for teaching, research and administration related to the SDM. Furthermore, "The External Evaluation Report of a Doctoral Study Domain" from the ARACIS Evaluation of the SDM in 2021 and the development since then have been studied.

- On-site visit (general list of visited locations and categories of persons with whom debates have been organised);

The external on-site evaluation visit took place from July 27 to 29, 2026, with the participation of all members of the external evaluation panel. Meetings were organized between the team of expert evaluators and:

- the leadership of UTCN Doctoral School
- members of UTCN's quality assurance organizational structures
- the team that has drafted the internal evaluation report
- teaching staff involved in the activities of the evaluated study program
- heads of research centers/laboratories associated with the Mathematics Doctoral Domain
- employers partners of the program
- doctoral students of the study program
- graduates of the study program.

Additionally, in the presence of representatives from program evaluated, the panel of evaluators visited the facilities available to students enrolled in the UTCN Doctoral School, Mathematics Domain (lecture halls, seminar rooms, laboratories), the university library, the secretariat.

- Other relevant methods or aspects.

In order to ensure an integrated evaluation process, the panel cross-referenced the provided written documents (Internal Evaluation Report, Annexes) with information gathered during

meetings held during the visit on site and with other observations; this led to the formulation of substantiated and objective assessments regarding the degree of compliance with performance standards and indicators, in accordance with the ARACIS methodology.

III. Judgement on the extent to which the standards and performance indicators are fulfilled

DOMAIN A. Institutional capacity

Criterion A.1. Managerial and administrative structures and processes involving students and other stakeholders

Standard S.A.1.1. Organisational components and institutional processes

The HEI has organisational components in its structure, which function based on adequate competences, responsibilities, processes, and implementation procedures, and ensure an effective management system.

Indicator I.P.A.1.1.1	For delivering the study programme/domain, the HEI has adequate organisational components and an adequate management system, which operate based on methodologies, regulations and procedures that are periodically reviewed as required by law.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The Mathematics Doctoral Domain is part of the IOSUD-UTCN, in accordance with the national legislation, the University Charter, the Institutional Regulations, and applicable internal rules. The organizational structure comprises executive leadership roles—Head of the Doctoral School of the UTCN, coordinators of the doctoral domains—and collective bodies, namely the Council of the Doctoral School and the Coordination Councils of Doctoral Programs. The DS's activities are governed by IOSUD methodologies, while leadership responsibilities are defined by internal regulations and job descriptions. Management and quality assurance are carried out based on the strategic and operational documents of both the university and the faculty. The doctoral domain systematically applies the IOSUD methodologies. Part of the regulations, methodologies, and procedures have been recently developed and updated, highlighting the institution's commitment to the periodic review of its procedural framework and the effective functioning of the management system.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The institutional management system and the organizational structure of the Mathematics Doctoral Domain are clearly defined and functional, ensuring the efficient and coherent coordination of teaching, research, administrative, and quality assurance activities. The operations of the program are governed by documents that are revised whenever legislative changes occur, or periodically. The involvement of the relevant bodies: the University Senate, the CSUD, the DAC. Updated documents are approved by the authorized bodies and communicated to the academic community via institutional channels. The existence of a comprehensive procedural framework, the functioning of quality assurance bodies, and monitoring through annual reports, internal evaluations, and management reviews confirm that the institution possesses appropriate organizational mechanisms and an efficient management system. These mechanisms comply with legal requirements and



ARACIS standards, supporting the proper conduct of the program under evaluation. The visit confirmed the proper functioning of the management and quality structures, as well as the use of institutional documents for monitoring and reviewing program activities.

✓ Aspects that constitute best practice examples

Best practice examples: transparent publication of the IOSUD structure, organizational chart, regulations; standardization of admission, annual monitoring, completion of studies procedures; systematic integrity checks.

✓ Recommendations

Periodic updating the procedural framework; clearer highlighting of the specific indicators in the annual analysis and the internal evaluation reports.

The indicator is: fulfilled

Standard S.A.1.2. Stakeholder engagement

The HEI proves that it engages the relevant stakeholders in developing methodologies and regulations, as well as implementation procedures.

Indicator
I.P.A.1.2.1

The opinions of the faculty and department members, of the subsidiary or extension* and of other stakeholders are considered in the process of adopting and revising methodologies, regulations and implementation procedures.

✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Internal and external stakeholders are involved in the process of adopting and revising methodologies and regulations of SDM. The adoption, revision, and updating of methodologies, regulations, and procedures are carried out in a participatory manner, in accordance with the internal regulations in force, namely the UTCN Charter, the Quality Assurance Methodology in IOSUD-UTCN, the Regulation on the organization and functioning of the Quality Evaluation and Assurance Commission (CEAC), the Institutional Regulation on the Organization and Conduct of Doctoral University Studies and Advanced Postdoctoral Research Programs at the UTCN. Strategic and procedural documents are reviewed and endorsed by the academic bodies of the Doctoral School and UTCN—such as the Council for University Doctoral Studies (CSUD), the doctoral field coordination councils, and the Quality Evaluation and Assurance Commission (CEAC)—while final versions are approved, as applicable, by the UTCN University Senate. For the Mathematics doctoral field, the review process involves members of the "Applied Sciences" program coordination council and the council coordinator; consultations are held with academic staff, students (through their representatives in governing bodies), and external partners—namely employers, public institutions, and alumni. Stakeholder consultation is documented through meeting minutes, CEAC reports, and questionnaires.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The decision-making process within the Faculty of Sciences and Arts adheres to the principles of transparency, participation, and consultation, involving relevant stakeholders in the drafting and revision of internal documents. The Quality Evaluation and Assurance Commission (CEAC) helps ensure the traceability of consultations, while approvals are granted by the competent bodies—including the University Senate—in compliance with the legal framework. Students are represented in the Council for Doctoral Studies (CSUD) and doctoral study coordination councils, holding voting rights and the opportunity to submit proposals regarding regulations that affect their academic activities. Furthermore, academic staff and program coordinators participate in the analysis and updating of relevant

* The faculty, department, subsidiary, extension - hereinafter "organisational components"

documents. The stages of the process are documented through meeting minutes, official records, and CEAC reports, demonstrating the existence of a participatory, transparent, and efficient decision-making framework. However, the participation of external stakeholders seems to be rather informal.

✓ Aspects that constitute best practice examples

The approval flows are public and can be verified. IOSUD's administrative structures (OEIA, School Documents Service, digital doctoral platform) support a predictable and traceable process.

✓ Recommendations

The participation of external stakeholders should be more formalized and regulated.

The indicator is: fulfilled.

Criterion A.2. The material resources and optimisation of the use of the material resources

Standard S.A.2.1. Material resources

The HEI owns adequate movable and immovable assets to enable it to carry out the study programme/domain.

Indicator I.P.A.2.1.1	The HEI legally owns venues for the related education, research and administrative processes, as well as for services for students, doctoral students and trainees, thus providing an enabling environment for living and studying, including for disabled persons. Optimal venues are also provided for activities of the staff. Such venues are adequately equipped.
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✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The doctoral domain Mathematics operates in the premises of the Department of Mathematics of the Faculty of Automation and Computer Science. The visit of the material base carried out on 29.07.2026 covered rooms 197, the Numerical Computation Laboratory 198 and 286, the UTCN buildings on Barițiu Street, where seminars and laboratory classes are held, and the new UTCN HUB, which hosts conferences and events and also provides offices for the doctoral students involved in research projects. Two offices are assigned to the doctoral students for their research work. Complex computations are run on a supercomputer made available by the university, which can also be reached through the cloud, and the software licences provided are MATLAB and Wolfram Mathematica.

Administrative services are provided by the IOSUD-UTCN secretariat, with published opening hours and a secretary assigned to the domain. Doctoral students also use the UTCN Library, with over 586,000 volumes and remote access through VPN, and the university's social infrastructure: 4,935 accommodation places, canteens, medical services, sports facilities and the Career Counselling and Guidance Centre.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The venues are legally held by the university and are correlated with the number of doctoral students enrolled. Mathematics does not require dedicated experimental infrastructure, so the resources that determine the quality of the doctoral route are individual working space, computing capacity and access to the scientific literature; all three were found available and in working order. Access to the laboratory is granted on the basis of prior registration with the security service, an arrangement the doctoral students described as workable.

✓ Recommendations: no

The indicator is: fulfilled.

Standard S.A.2.2. Management of material resources

The organisational components manage the movable and immovable assets used for the evaluated study programme/domain in an optimal, sustainable manner.



Indicator I.P.A.2.2.1	The movable and immovable assets are properly maintained to ensure optimal conditions for studying, living and research, as well as for work.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Maintenance is managed centrally, by the General Administrative Directorate and the Technical Directorate, on the basis of the annual repair and investment plan and is documented through the institutional electronic workflow JobRouter. At the level of the domain, the Faculty of Automation and Computer Science and the Department of Mathematics are responsible for the periodic maintenance of the computer rooms, for updating the equipment and the software licences, and for monitoring the networks, lighting and air conditioning. For 2021–2024 the internal evaluation report lists the modernisation of the computing laboratories, the extension of the digital infrastructure and investments in academic and administrative spaces financed through CNFIS-FDI projects.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The premises visited were clean and properly lit, and the equipment was functional. The doctoral students stated that the software provided is appropriate for the research they carry out for their theses and that their relationship with the secretariat is very good, documents being obtained by e-mail or settled by telephone. No situation was reported in which activities had to be interrupted because of the condition of the premises or of the equipment. The internal evaluation report identifies the limited high-performance computing capacity as a weakness; this concerns the intention to expand into computationally intensive research and not the adequacy of the current base, which covers the needs of the theses in progress.

- ✓ Recommendations: no

The indicator is: fulfilled.

Criterion A.3. Adequate human resources and transparent staff recruiting procedures developed according to the law

Standard S.A.3.1. Human resources	
The HEI has the required human resources to organise and deliver the evaluated study programme/domain.	
Indicator I.P.A.3.1.1	The human resources of the organisational component are suitable to perform the activities pertaining to the evaluated study programme/domain. The teaching staff has the required qualifications and professional competences to teach the subject matters assigned to them in the job list.

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The staff involved in the program includes: qualified doctoral supervisors; teachers and researchers of the Department of Mathematics; administrative staff (Doctoral School, CSUD, School Documents Service, OEIA).

The human resource is correlated with the needs of the doctoral program and covers all the main areas of the field: mathematical analysis, geometry and topology, optimization, probabilities, mathematical models, numerical methods, applied sciences. All PhD supervisors in the field of Mathematics are qualified according to the legislation and confirmed by IOSUD-UTCN. Their list is published and updated periodically on the IOSUD website, together with: academic CVs, research topics, lists of publications, projects and collaborations

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

All doctoral supervisors hold the habilitation according to the legislation in force; their scientific experience is demonstrated through international publications, grants and collaborations; their expertise covers fundamental and applied directions of mathematics; the staff involved teach specific subjects in direct relation to their specialization; the program uses efficient administrative structures (SD secretariat, School Documents, OEIA);

- ✓ Aspects that constitute best practice examples

The list of PhD supervisors is published and updated periodically on the IOSUD website, together with: academic CVs, research topics, lists of publications, projects and collaborations. There is an adequate ratio between the number of doctoral students and supervisors.

- ✓ Recommendations

Expand the group of PhD supervisors in Mathematics by qualified scientists from abroad in order to strengthen internationalization.

The indicator is: fulfilled.

Indicator I.P.A.3.1.2	The HEI ensures professional and personal development for its staff.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The professional and personal development for the staff is realized by: participation in international conferences and workshops, academic mobilities and bilateral agreements, involvement in national and international research projects, internal training programs offered by UTCN (pedagogy, academic integrity, digital skills, research management), access to the UTCN digital infrastructure, thematic meetings, presentation sessions, mentoring for new PhD advisors or those in the first years after habilitation.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

No deficiencies in professional development of the staff have been identified; the activities are correlated with the objectives of the UTCN. The research laboratories/ hubs provide the infrastructure necessary to this purpose.

- ✓ Recommendations

Additional support for PhD supervisors in project and publication activities, including digital collaborative work tools, is recommended.

The indicator is: fulfilled.

Standard S.A.3.2. Recruitment procedures	
Teaching staff recruitment procedures compliant with the provisions of the law.	
Indicator I.P.A.3.2.1	Recruitment procedures comply with the provisions of the law, and are established and carried out transparently.

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The teaching and research staff for the evaluated program are recruited and hired based on criteria established at both national and institutional levels, in compliance with applicable legal provisions (Regulation for obtaining the certificate of habilitation and affiliation to the Doctoral School – HSU no. 2010/17.04.2025, Procedure regarding the empowerment in IOSUD-UTCN, Edition III, Revision 2 (02.12.2024) . UTCN ensures adequate staffing—in terms of both numbers and qualifications—to carry out the required activities.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The process of habilitation and affiliation to the Doctoral School is governed by the applicable legal provisions. The recruitment procedures are clearly defined and respect legislation. The procedural steps include: publication of the position and the competence sheet; submission of the digital file in the JobRouter platform; verification of compliance with the UTCN legislation and Methodology; public tests (interview, demonstration lesson); evaluation of the research portfolio according to CNATDCU standards; institutional endorsement and validation (Faculty Council, Board of Directors UTCN, UTCN Senate).

- ✓ Aspects that constitute best practice examples

An additional specific criterion in the Doctoral School of Mathematics is the fact that a maximum of 20% of the calculated points can be in APC journals in accordance with the future CNADTCU standards for mathematics (from 2026).

- ✓ Recommendations: no

The indicator is: fulfilled.

Criterion A.4. Digitalisation of institutional processes

Standard S.A.4.1. Digital transformation

The digital transformation process in the organisational component seeks to achieve administrative simplification and improve the quality of the services provided to the members of its own community, as well as to third parties.

Indicator I.P.A.4.1.1	The organisational component uses IT tools in its own procedures, to improve access and provide good quality services for the members of its own community and the indirect beneficiaries of education.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The field of doctoral studies in Mathematics uses an institutional ecosystem of electronic platforms and applications coordinated by UTCN and IOSUD-UTCN. All administrative, academic and research processes are supported by validated and scalable IT solutions. Among these we mention the IOSUD platform for a complete management of the activities including electronic submissions, reports, commissions/panels, anti-plagiarism, public defenses, calendars; the Integrated Student System for a digitized admission process; UTCN Digital – the central digital platform of UTCN; CloudUT – for computing, storage, academic resources; digitized bibliographic and research resources; digital infrastructure specific to mathematics.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The digital environment at UTCN is mature, well integrated and fully functional, providing decisive support for research and teaching (complete computational mathematical resources, electronic libraries, collaboration platforms) as well as for administrative actions – electronic submissions, full traceability, digital archiving).

- ✓ Aspects that constitute best practice examples

The doctoral programme in Mathematics uses IT tools for a variety of activities, including administrative platforms and research facilities.

- ✓ Recommendations: no

The indicator is: fulfilled.

DOMAIN B. Educational efficacy

Criterion B.1. Content and relevance of study programmes

Standard S.B.1.1. Content of study programme/s*

The study programme is based on a curriculum designed so that students can acquire the expected learning outcomes.

Indicator I.P.B.1.1.1	The study programme is developed and structured according to the expected learning outcomes, and organised based on transferable study credits. It includes all learning, teaching, practical training, research and evaluation experiences, which, together, lead to a higher education qualification.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The study programme of the doctoral domain Mathematics, organized within the Doctoral School of UTCN, is presented through a package of academic documents comprising the regulations governing the organization, the educational offer, documentation regarding alignment with the National Qualifications Framework, the curriculum, course descriptions, the procedures related to the public defense of the doctoral thesis. The program is designed, developed, and organized in accordance with expected learning outcomes and the principles of the European Credit Transfer and Accumulation System (ECTS), ensuring coherence among targeted competencies, course content, teaching, learning and research methods, and forms of assessment.

The program includes **Advanced University Preparation Program (PPUA)**, organized on **transferable credits** - it includes in-depth disciplines, selected and approved by the Coordinating Council for Applied Sciences and the Doctoral School; **Individual Research Program** - includes all scientific activities: development of the research theme and plan; reports; scientific presentations; publication of the results; drafting and defending the thesis.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The curriculum is coherent, relevant and up-to-date, aligned with both ARACIS standards and developments in mathematical research. We remarked that the following issues are demonstrable by the documents provided before and during the visit: correlation of the expected learning outcomes with the curriculum and the research activity; structured flexibility; procedural rigor; periodic update; scientific relevance of subjects and instructors.

- ✓ Aspects that constitute best practice examples

The disciplines are taught by staff with scientific activity confirmed through publications, grants and international visibility.

The PhD student can customize the content of the PPUA according to the research topic, with the approval of the supervisor and the Council of the Doctoral School.

- ✓ Recommendations

Periodic updating of PPUA disciplines to integrate modules for the formation of complementary skills: scientific writing, presentation skills, use of IA and machine learning tools.

The indicator is: fulfilled.

Criterion B.2. Alignment of the curriculum with the qualification

Standard S.B.2.1. Alignment with the qualification level and the intended competences

In the curriculum design and development process, the organisational component seeks to ensure the qualification level, as well as correlation with the envisaged occupations.

* The term "programmes" concerns the external quality evaluation for the study programmes contained in a master/doctoral domain. The term "programme" shall be used hereinafter.

Indicator I.P.B.2.1.2	The expected learning outcomes are correlated with the competences required by those occupations, according to the occupational standards and/or the European Skills, Competences and Occupations (ESCO).
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The course specifications reflect the alignment between objectives, learning outcomes, content, teaching and learning methods, assessment methods, and minimum requirements for passing. They are oriented towards learning outcomes, communicated to students, and accessible via the institutional channels. Stakeholders, including graduates and employers, were consulted during the analysis and validation process.

The expected learning outcomes are correlated with the competencies required by the occupations specific to fundamental and applied research, according to the National Qualifications Framework and European classification ESCO. It is built in accordance with national legislation (Law 199/2023, Code of Doctoral Studies), with the IOSUD-UTCN Institutional Regulation (RI 2024) and with international standards for the training of researchers in mathematical sciences. The curriculum and PPUA are structured in such a way as to lead directly to the acquisition of these skills.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

According to the documents presented, the doctoral program in Mathematics ensures a very good correlation between learning outcomes and the targeted occupations. The structure of the disciplines and the activities of the individual research program support the formation of the necessary skills necessary for the research activity. The content of the PPUA subjects, according to the descriptions of the courses, reflects the competencies required for ESCO occupations in the field of mathematics; the research expertise of the advisors are aligned with the subjects in which the PhD students carry out their research activity; the requirements for publication, presentation at conferences and thesis preparation are directly correlated with the international standards of the profession; the doctoral framework offers flexibility, allowing the adaptation of the research subject and the PPUA to the specifics of the occupation that the doctoral student is targeting.

- ✓ Recommendations

Periodic review and updating of the learning outcomes, using clear, observable, and measurable formulations.

The indicator is: fulfilled.

Criterion B.3. Student-centred learning, teaching and evaluation

Standard S.B.3.1 Principles	
The organisational component implements the principles of student-centred learning.	
Indicator I.P.B.3.1.1	The organisational component ensures implementation of the student-centred learning in the curriculum and through the teaching strategies used in the learning and teaching activities and experiences.

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The doctoral route is built around the individual research project. Under the Institutional Regulation approved by Senate Decision no. 1853/26.09.2024 and the Regulation of the UTCN Doctoral School, the guidance committee is established by the supervisor after consultation with the doctoral student, within at most 30 days from enrolment, and the topic of the research project is agreed by the supervisor together with the doctoral student. The doctoral student attends three to four subjects selected together with the supervisor and approved by the coordination council and by the doctoral school council. Each of these steps are published on the IOSUD website. Doctoral students hold two of the five seats on the Applied Sciences coordination council, and their opinion is collected through the doctoral student self-

assessment sheet annexed to the domain self-assessment methodology approved by Senate Decision no. 2123/27.11.2025.

During the meeting of 28.07.2026 the doctoral students stated that the thesis topics are proposed both by the supervisors and by the doctoral students themselves, that their relationship with the supervisors is good and that the latter are available whenever needed, and that conference presentations are rehearsed together with the supervisor.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The learning path is individualised by construction, and the formal mechanisms allow the doctoral student to influence both the content and the pace of the programme; the doctoral students confirmed that this happens in practice. Two features deserve to be noted: the coordination of the research rests almost entirely with the supervisor, the guidance committee intervening only when the research reports are presented, and the reports are not presented in the presence of other doctoral students. Both are understandable given the size of the cohort, but they make the supervisor the single reference point and limit the exposure of the work to feedback from outside the supervisor–student pair.

- ✓ Aspects that constitute best practice examples

Doctoral students hold two of the five seats on the Applied Sciences coordination council.

- ✓ Recommendations

Real engagement from the guidance committee in preparing the research progress reports of the PhD students.

The indicator is: fulfilled.

Indicator I.P. B.3.1.2	The organisational component ensures opportunities for students to participate in academic mobility programmes organised in person and/or virtually.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Doctoral students have access to Erasmus+ study and traineeship mobility on the same terms as the other study cycles; the doctoral level is expressly provided for in the bilateral agreements, the selections are organised annually at faculty level and the maximum duration is 12 months per study cycle, including zero-grant mobility. As a member of the European University of Technology alliance, UTCN provides access to the EU+ mobility platform and to a supplementary grant for mobilities at partner universities, and the IMPACT+UTCN project offers additional support of up to EUR 500 per month, including for students from disadvantaged groups. Joint supervision is regulated institutionally, the procedure being published on the IOSUD website. For the evaluated period the internal evaluation report documents seven doctoral students from Thailand hosted at the North University Centre of Baia Mare through Erasmus+ and, under the agreements with three Thai universities, 17 doctoral students over the last eight years, 13 of them under joint supervision.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The framework exists, is functional and is financially supported. Both the doctoral students and the graduates stated that their participation in international mobility is limited by their job and by their family life; most of them are employed, in some cases outside the university, and the graduates reported Erasmus mobilities and summer schools subject to the same constraint. The limiting factor is therefore the personal situation of the cohort rather than the availability or the funding of the framework.

✓ Recommendations: no

The indicator is: fulfilled.

Standard S.B.3.2. Fairness

The organisational component provides fair opportunities for students.

Indicator I.P.B.3.2.1	The organisational component provides fair opportunities for students, in line with their potential and aspirations, taking into account the diversity of learning styles and abilities
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✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Access to the programme and the conduct of the studies are governed by rules applied uniformly to all doctoral students of the domain. The individualization of the route is achieved through the research project agreed with the supervisor, through the choice of subjects and through the possibility of interrupting the stage for medical reasons, maternity leave or childcare leave, of extending it by one to two years or of reducing it by one year, on the basis of request forms published by IOSUD. Doctoral students have free access to the psychological and career counselling provided by the Career Counselling and Guidance Centre, present both in Cluj-Napoca and in Baia Mare. The cohort includes both scholarship holders and doctoral students employed outside the university; teaching hours are assigned on an hourly-paid basis, while those holding a basic teaching position have teaching loads established in accordance with the law.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

Equity is ensured through the uniform application of the procedures and through the flexibility of the route, and the support instruments are institutional rather than dependent on the individual supervisor. The doctoral students confirmed that they receive the same information and have comparable working conditions regardless of the year of study or of the supervisor, and no situation of differential treatment or of unequal access to resources was reported for the evaluated period. The graduates stated that participation in conferences was generally covered by the university or financed from the research projects in which they were involved, that a reward scheme exists for articles published in Q1 and Q2 journals, and that the doctoral scholarship was a real help, support available on the same terms to all doctoral students of the domain.

✓ Recommendations: no

The indicator is: fulfilled.

Criterion B.4. Accessibility and efficiency of the resources and support services, adequate for learning

Standard S.B.4.1. Access to resources and services

The organisational component provides access to adequate resources and support services, according to the needs of the students.

Indicator I.P.B.4.1.1	The organisational component provides students, including those with special educational needs/disabilities, with access to resources and services designed to support the learning process, adequate for the individual learning needs, the study domain, the study cycle, and the form of organisation of the study programme.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Doctoral students have full access to the electronic bibliographic resources subscribed through ANELIS Plus, including Elsevier, SpringerLink, Wiley, SIAM and AMS, to the UTCN Library with remote access through VPN, to the computing laboratories and the licensed software confirmed during the visit, and to the institutional platform for doctoral studies, through which documents, reports, committees, the similarity check and the calendar of defences are managed. Support services are provided by the Career Counselling and Guidance Centre, which offers free psychological counselling and career guidance on site and online, by the School Documents Service and by the Office of Ethics and Academic Integrity. The internal evaluation report states that doctoral students with special educational needs benefit from access adaptations, digital support and specialised counselling.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The resources are adequate for the specific character of the domain and for the third study cycle: access to the international literature and computing capacity are the decisive resources, and both are provided at institutional level without formalities that would discourage their use. The doctoral students described the software as appropriate for their research and the administrative support as prompt, and the graduates stated that the basic information on the conduct of the studies was accessible.

- ✓ Recommendations: no

The indicator is: fulfilled.

Criterion B.5. Learning outcomes

Standard S.B.5.1. Definition and evaluation

Learning outcomes are adequately defined and evaluated.

Indicator I.P.B.5.1.1	Learning outcomes are adequately described, and they support understanding of the students' and teachers' expectations regarding the content of the subject matters in the curriculum.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Learning outcomes are defined at two levels. At institutional level, the Procedure on ensuring the fulfilment of qualification level 8 under the National and the European Qualifications Frameworks, Revision 1, approved by the Administrative Board on 11.05.2021, sets the descriptors of the doctoral qualification. At the level of the individual route, they are detailed in the course descriptions annexed to the internal evaluation report and in the scientific research programme agreed with the supervisor, both made available to the doctoral student at the beginning of the stage. Attendance of each subject is certified by the course holder and countersigned by the supervisor, on a standard form published by IOSUD.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The description of the outcomes is consistent with level 8 of the qualifications framework and is known to the doctoral students, who described the common core subjects of the first year and the specialised ones as useful and singled out the scientific writing course; they suggested that a course on the use of artificial intelligence would also be useful. The graduates confirmed that the training received was useful in their current activity and that the demanding character of the programme was justified.

✓ Recommendations: no

The indicator is: fulfilled.

Indicator I.P.B.5.1.2	Achievement of the learning outcomes is checked in ongoing examinations and study completion exams.
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✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Verification is carried out in stages. In the first six months of the stage the doctoral student attends and passes the subjects of the advanced university studies programme, for which attendance certificates are issued and filed with the IOSUD secretariat, and publicly presents the scientific research project. During the scientific research programme four research reports are planned, with an interval of at most six months between two consecutive presentations, each concluded with minutes signed by the supervisor and by the guidance committee. The studies are completed by the public defence of the thesis, organised under the operational procedure on the completion of doctoral studies, Edition III, Revision 3, approved by the Administrative Board on 24.03.2026, which includes the similarity check performed by the Office of Ethics and Academic Integrity. In the evaluated period five theses were defended in the domain.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The assessment system is continuous, documented and predictable, and it allows deviations from the research plan to be identified early: the six-month interval is short enough for the guidance committee to intervene in time, and the minutes make each stage traceable. The doctoral students confirmed that the criteria were communicated at the beginning of the stage. They also stated that the reports are not presented before other doctoral students, so the assessment remains within a restricted circle. The results validate the assessment externally: the doctoral students have published in journals ranked in the first two quartiles of the discipline, and the graduates reported articles indexed in the Web of Science and papers presented at conferences.

✓ Recommendations: no

The indicator is: fulfilled.

Criterion B.7. Procedures and practices regarding the admission competition, the journey, recognition and equivalence of studies, and result certification

Standard S.B.7.1. Admission	
The admission procedures and principles ensure access to higher education.	
Indicator I.P.B.7.1.1	The organisational component applies the admission procedures.

✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Admission is organised under the Regulation on the organisation of admission to doctoral studies, approved by Senate Decision no. 2173/26.02.2026. For the academic year 2026–2027 the admission calendar, the list of doctoral supervisors updated on 01.05.2026, the number of places allocated to each doctoral programme and the fees, including the possibility of requesting an exemption or a reduction, are published on the IOSUD website. Registration is carried out through the electronic platform, with tutorials for candidates in Romanian and in English; the application must carry the endorsement of the prospective supervisor, the minutes of the admission colloquium are uploaded by the supervisor on the

day it is held, and the place is confirmed by submitting the master's diploma in original. The internal evaluation report describes the same stages but refers to the previous regulation, approved by Senate Decision no. 1785/21.03.2024.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The procedure is public, standardised at university level and applied uniformly; the selection is based on the academic file and on the assessment of research potential, and no dispute or non-conformity was reported during the evaluated period.

- ✓ Recommendations: no

The indicator is: fulfilled.

Indicator I.P.B.7.1.2	Admission in higher education study programmes complies with the principles of fairness and equal opportunities, and with the establishing of support measures to ensure access of vulnerable groups at social and educational risk, including candidates with special educational needs and/or disabilities.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The admission regulation and the documents published on the IOSUD website apply to all candidates, and the eligibility conditions contain no restrictions related to social status, ethnicity, gender or disability. Registration is carried out entirely online, the tutorial is available in Romanian and in English, and a separate page is dedicated to international doctoral students. The list of documents expressly provides for a request for exemption from or reduction of the admission fee. Candidates in situations of educational or social risk may use the counselling services of the Career Counselling and Guidance Centre and the ESCOUNIV platform, dedicated to social equity in access to university studies.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The applications are assessed exclusively on academic criteria and research potential, the information is communicated identically to all candidates, and no complaint concerning discrimination was recorded during the evaluated period. The support measures exist and are documented at institutional level, and the adaptations for candidates with special educational needs were confirmed as practice, although they are not described in a document specific to doctoral admission; no such request was submitted in the domain in the evaluated period.

- ✓ Recommendations: no

The indicator is: fulfilled.

Standard S.B.7.2. Academic journey of students	
The organisational component carries out actions supporting the students' academic journey.	
Indicator I.P.B.7.2.1	The organisational component applies the regulations concerning the students' professional activity.

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The professional activity of doctoral students is governed by the Institutional Regulation approved by Senate Decision no. 1853/26.09.2024 and by the Regulation of the UTCN Doctoral School, both published in the regulations section of the IOSUD website together with the operational procedures on the completion of studies, on ethics and academic integrity and on the prevention of plagiarism. Their

application is documented through the forms published by IOSUD for interruption, resumption, extension and reduction of the stage, change of supervisor, change of the thesis title, transfer and withdrawal, and through the annual assessment of progress before the guidance committee. The self-assessment of doctoral students and of supervisors is standardised through the sheets annexed to the domain self-assessment methodology approved by Senate Decision no. 2123/27.11.2025. Scholarships from the university's own revenues are granted under Administrative Board Decision no. 76/06.09.2016, with a monthly activity report.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The regulations are complete, public and applied uniformly in the domain; the deadlines, the endorsement circuit and the decision-making competence are established for each situation. The doctoral students confirmed that the rules were communicated at the beginning of the stage, that changes to the regulations are transmitted to them by e-mail, and that they know who their student representatives are, although they had not contacted them so far. The graduates stated that the basic information on the conduct of the studies was accessible throughout.

- ✓ Recommendations: no

The indicator is: fulfilled.

Criterion B.8. Internationalisation process

Standard S.B.8.1. Internationalisation

Improving the quality of education and research through internationalisation actions.

Indicator
I.P.B.8.1.1

The organisational component carries out international cooperation actions supporting mobility of the members of its own community and collaboration in academic and research activities.

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
UTCN supports internationalization by its membership in the European University of Technology (EUT+) alliance and participation in the Erasmus+ Program as well as by numerous bilateral agreements with universities in the EU, North America and Asia.
- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled
Many of these agreements are not alive and useful for the Doctoral Program Mathematics. The Nonlinear Analysis Research group is very active in collaborating with three universities in Thailand and in organizing international conferences.
- ✓ Recommendations: A strategy with clear goals for international cooperations in the field of SDM should be developed. On the level of PhD studies cooperations will only work if there exist shared research interests and outgoing students are supervised at the partner university. As many PhD students for private reasons do not have the possibility to go abroad, strengthen internationalization "at home". Especially in Mathematics it should not be a problem to offer courses within the training program given in English language and look for international co-advisors. All regulations concerning the PhD Program Mathematics should be published in English and easy to find placed on the homepage of UTCN.

The indicator is: fulfilled.

Criterion B.9. Scientific research results

Standard S.B.9.1 Scientific research in the education process

Scientific research activities support students in achieving the learning outcomes.

Indicator I.P.B.9.1.1	Learning based on scientific investigation and research results support and are capitalised upon in achieving the learning outcomes envisaged through the study programme.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

Scientific research activities are part of the training of the UTCN Doctoral School in Mathematics. This is proved by publications in high-quality scientific journals, collaboration in research projects, and participation at conferences.

- ✓ Recommendations: no

The indicator is: fulfilled.

Standard S.B.9.2. Scientific research pertaining to the objectives of the study programme

The organisational component carries out scientific research activities aligned with the objectives of the evaluated study programme.

Indicator I.P.B.9.2.1	The results of scientific research are visible at national and international level in that scientific domain, and capitalised upon in an adequate manner.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The scientific research activities of PhD supervisors and PhD students in Mathematics are documented by published articles, participation at international conferences, research collaborations, and the organization of workshops etc.

- ✓ Recommendations: The training program for PhD students should be extended by the inclusion of doctoral seminars, where the students learn and practice the presentation of their scientific results in English language.

The indicator is: fulfilled.

DOMAIN C. Quality management

Criterion C.1. Quality assurance strategies and procedures, including in the field of academic ethics and conduct, which involve students, employers and other stakeholders and are applied in a consistent, transparent manner

Standard S.C.1.1. Application

Adequately implemented strategic directions, actions, and procedures

Indicator I.P.C.1.1.1	The organisational component consistently carries out actions and applies procedures, proving their impact on improving the quality of education at the level of the study programme
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

Not least because of the activities of ARACIS and the influence by European organizations such as ENQA, quality assurance and quality management have a high value at UTCN. The University has implemented the necessary procedures (annual monitoring of students, checking quality of theses, analysis of research results, collecting feedback, and internal audits) to monitor and improve the quality of the SDM. For the benefit of Doctoral Studies in Romania the ARACIS evaluation procedure for Doctoral Studies has been significantly improved and has become more focused during the last years.

- ✓ **Recommendations:** Observe that bureaucratic burden does not superimpose the benefits of evaluation procedures. Make results and consequences of evaluations visible for all members of UTCN. Simplify procedures as much as possible and consider evaluation procedures as a unique chance for discussions on the future of the organization.

The indicator is: fulfilled.

Standard S.C.1.2. Stakeholder engagement

The HEI proves that it engages the stakeholders who have relevant activity in applying the procedures.

Indicator I.P.C.1.2.1	The opinions of the members of its own community and of other stakeholders are taken into account in the procedure implementation process.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

Doctoral supervisors and members of the Department of Mathematics are periodically consulted, doctoral students give their feedback and stakeholders from outside UTCN give an external opinion on training needs and research for doctoral students in Mathematics.

- ✓ **Recommendations:** Improve the involvement of external stakeholders (employers) by defining fixed procedures for soliciting their opinion.

The indicator is: fulfilled.

Criterion C.2. Functionality of education quality assurance structures, including in the field of academic ethics and conduct, according to the law

Standard S.C.2.2. Operation

Quality assurance and academic ethics and conduct organisational structures adequately perform their specific role and functions.

Indicator I.P.C.2.2.2.	The academic ethics commission operates based on the regulation approved by the University Senate, and performs actions that are compliant with the law, independently from any other structure or person in the higher education institution.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The University Ethics Commission operates independently on the basis of regulations approved by the Senate in accordance with Law 199/2023. The commission includes a sub-commission for treated cases related to scientific research.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The Ethics Commission had no cases related to the Mathematics doctoral domain.

- ✓ Recommendations: no

The indicator is: fulfilled.

Criterion C.3. Procedures for the initiation, monitoring and periodic review of the study programmes and domains and of the performed activities, involving students, employers and other stakeholders

Standard S.C.3.1. Procedures and implementation of procedures

The HEI has procedures for initiating, monitoring, and periodically reviewing the study programmes and domains and the performed activities, and applies them systematically.

Indicator I.P.C.3.1.1	The organisational component consistently applies the procedures, and proves their impact on quality assurance.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled
- ✓ Annual evaluations of the quality of the Doctoral Program Mathematics are performed. The scientific output of doctoral supervisors and doctoral students is collected. Stakeholders are asked for feedback and best practice examples. Supervisors and students are discussing possibilities for maintaining and improving the quality of the SDM.
- ✓ Recommendations: no

The indicator is: fulfilled.

Indicator I.P.C.3.1.2	Members of its own community and other stakeholders are involved in the procedure implementation process.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

According to the IOSUD procedures doctoral students and doctoral supervisors are involved in the monitoring and revision of the doctoral program. The members of the Department of Mathematics contribute by discussion on research directions and infrastructure needs to the development of the program. International partners and employers are involved informally into the formation of PhD students in Mathematics.

- ✓ Recommendations: Establish fixed procedures for the involvement of international partners and employers into the further development of the PhD Program Mathematics.

The indicator is: fulfilled.

Criterion C.4. Procedures for the periodic evaluation of the quality of the activities of teaching staff, auxiliary teaching staff, and administrative staff

Standard S.C.4.1. Procedures

Applying the methodologies and procedures contributes to improving the quality of the staff's activities.

Indicator	The organisational component analyses the results of the students' biannual evaluation of teachers.
I.P.C.4.1.1	

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
 - ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled
- The procedures for the evaluation of teaching are well defined and also carried out. The results are discussed and used for improving teaching methods.
- ✓ **Recommendations:** Students should be encouraged to take a more active role in quality improvement procedures by making the benefits of QA for teaching more transparent.

The indicator is: fulfilled.

Criterion C.5. Systematically updated databases on internal quality assurance

Standard S.C.5.1. Databases

The HEI uses databases to support internal quality assurance activities.

Indicator	The organisational component systematically collects and analyses data required for the internal quality assurance process.
I.P.C.5.1.1	

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)
 - ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled
- All data necessary for the internal QA processes is being recorded.
- ✓ **Recommendations:** no

The indicator is: fulfilled.

Criterion C.6. Transparency of information of public interest, including those regarding the study programmes and domains offered, and transparency regarding the related certificates, diplomas and qualifications

Standard S.C.6.1. Transparency

The organisational component ensures transparency of information, as required by the law.

Indicator	The organisational component ensures publication and access to information of public interest regarding the evaluated study programme.
I.P.C.6.1.1	

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

✓

The Doctoral School publishes information regarding the Mathematics doctoral field via official websites: the UTCN and IOSUD's institutional websites and platform, the Doctoral School's webpage, the dedicated e-learning platform, and the national portal dedicated to thesis.

The Doctoral School's website publishes up-to-date information regarding: a general description of doctoral studies at UTCN; the curriculum and course syllabi (updated annually); admission requirements and selection criteria; regulations governing student academic activity; the university calendar, schedule, and academic year structure; doctoral supervisors; and Erasmus+ mobility opportunities; information on ethics and academic integrity; doctoral thesis in digital format and abstracts; information on public defenses, titles awarded, statistical data. Quality-related documents

(CEAC reports, internal procedures) are published on the institutional portal. All information is publicly available and periodically updated.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The transparency of information regarding the field of Mathematics is adequately and in accordance with the legal provisions. The information is periodically updated by the Doctoral School's secretariat under the coordination of the person in charge.

- ✓ Aspects that constitute best practice examples

The relevant documents and information are completely and publicly available.

- ✓ Recommendations: no

The indicator is: fulfilled.

Indicator I.P.C.6.1.2	The organisational component ensures transparent decision-making processes.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

✓

Transparency in decision-making processes is ensured through regulations in force and internal procedures consistently applied across UTCN. Decisions are made within deliberative and executive bodies—such as the UTCN Senate, the Council for Doctoral Studies (CSUD), doctoral study coordination councils, and the CEAC—with the participation of student representatives (comprising at least 25% of the total membership, in accordance with Art. 203 of Higher Education Law no. 199/2023).

Agendas, minutes, and adopted resolutions are communicated via institutional email and the internal platform. Relevant documents—including regulations, reports, resolutions, strategic plans, and council meeting minutes—are published on the Doctoral School's webpage.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The transparency of decision-making processes is consistently and adequately ensured in the field of Mathematics.

- ✓ Recommendations: no.

The indicator is: fulfilled.

Criterion C.8. Participation in external evaluation processes, according to the law

Standard S.C.8.1. Compliance with the external evaluation obligation

The HEI undergoes external quality evaluation as required by the law.

Indicator I.P.C.8.1.1	The organisational component carries out the procedures pertaining to the external quality evaluation process, aiming to organise the evaluated study programme as provided by the law.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

✓

The Mathematics doctoral field operates within the UTCN Doctoral School and undergoes periodic evaluation by ARACIS. The previous evaluation took place in 2021, and the program received the

rating "Maintenance of accreditation". According to the regulations in force, the implementation of the recommendations made was monitored through the 2024 interim progress report.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The doctoral study program in Mathematics at UTCN operates in accordance with the law, having been accredited and confirmed during the most recent ARACIS periodic evaluation (2021).

- ✓ Recommendations: no

The indicator is: fulfilled.

IV. SWOT Analysis

Strengths: ✓ UTCN enjoys a high reputation in teaching and research, both nationally and internationally. ✓ The PhD supervisors in Mathematics are highly qualified, with solid scientific activity. ✓ Very good digital infrastructure ✓ Collaboration between IOSUD, Doctoral School, Department of Mathematics, with consistent application of all internal procedures.	INTERNAL FACTORS 	Weaknesses: ✓ There is no master program in Mathematics at UTCN. The PhD Program Mathematics is oriented very theoretically. ✓ Low number of PhD students ✓ Limited resources for long term mobility (over 3 months) from internal sources ✓ Relatively weak international visibility of the field through website and public reports in English.
SWOT analysis		
Opportunities: ✓ Increasing the role of mathematics in AI, data	EXTERNAL FACTORS 	Threats: ✓ Decreasing interest in mathematical studies at

science, and phenomena modeling, which can attract motivated PhD students and interdisciplinary collaborations. ✓ Increased demand in the labor market for advanced analytical skills and mathematical expertise. ✓ Access to European funds (Horizon Europe, ERC, MSCA, Digital Europe) ✓ Collaborations with large medical centers (Sloan Kettering Cancer Institute). ✓ Cluj-Napoca is a nice and friendly city.		the national level, which reduces the selection base for PhD students. ✓ There are strong competitors in the university sector in Cluj-Napoca. ✓ Fluctuating funding for STEM fields at national level, with impact on projects and mobilities. ✓ Dependence on external digital resources (ANELIS, international databases) that may be affected by changes in licenses or funding.
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V. Extent to which the standards and performance indicators are fulfilled, and recommendations

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
DOMAIN A. Institutional capacity			
1.	I.P.A.1.1.1 For delivering the study programme/domain, the HEI has adequate organisational components and an adequate management system, which operate based on methodologies, regulations and procedures that are periodically reviewed as required by law.	F	Periodic updating the procedural framework; clearer highlighting of the specific indicators in the annual analysis and the internal evaluation reports.
2.	I.P.A.1.2.1 The opinions of the faculty and department members, of the subsidiary or ex The participation of external stakeholders should be more formalized and regulated. tension and of other stakeholders are considered in the process of adopting and revising methodologies, regulations and implementation procedures.	F	The participation of external stakeholders should be more formalized and regulated.
3.	I.P.A.2.1.1 The HEI legally owns venues for the related education, research and administrative processes, as well as for services for students, doctoral students and	F	

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
	trainees, thus providing an enabling environment for living and studying, including for disabled persons. Optimal venues are also provided for activities of the staff. Such venues are adequately equipped.		
4.	I.P.A.2.2.1 The movable and immovable assets are properly maintained to ensure optimal conditions for studying, living and research, as well as for work.	F	
5.	I.P.A.3.1.1 The human resources of the organisational component are suitable to perform the activities pertaining to the evaluated study programme/domain. The teaching staff has the required qualifications and professional competences to teach the subject matters assigned to them in the job list.	F	Expand the group of PhD supervisors in Mathematics by qualified scientists from abroad in order to strengthen internationalization.
6.	I.P.A.3.1.2 The HEI ensures professional and personal development for its staff.	F	Additional support for PhD supervisors in project and publication activities, including digital collaborative work tools, is recommended.
7.	I.P.A.3.2.1 Recruitment procedures comply with the provisions of the law, and are established and carried out transparently.	F	
8.	I.P.A.4.1.1 The organisational component uses IT tools in its own procedures, to improve access and provide good quality services for the members of its own community and the indirect beneficiaries of education.	F	
DOMAIN B. Educational efficacy			
9.	I.P.B.1.1.1 The study programme is developed and structured according to the expected learning outcomes, and organised based on transferable study credits. It includes all learning, teaching, practical training, research and evaluation experiences, which, together, lead to a higher education qualification.	F	Periodic updating of PPUA disciplines to integrate modules for the formation of complementary skills: scientific writing, presentation skills, use of IA and machine learning tools.
10.	I.P.B.2.1.2 The expected learning outcomes are correlated with the competences required by those occupations, according to the occupational standards and/or the European Skills, Competences and Occupations (ESCO).	F	Periodic review and updating of learning outcomes, using clear, observable, and measurable formulations.
11.	I.P.B.3.1.1 The organisational component ensures implementation of the student-centred learning in the curriculum and through the teaching strategies used in the learning and teaching activities and experiences.	F	Real engagement from the guidance committee in preparing the research progress reports of the PhD students.
12.	I.P.B.3.1.2 The organisational component ensures opportunities for students to participate in academic mobility programmes organised in person and/or virtually.	F	

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
13.	I.P.B.3.2.1 The organisational component provides fair opportunities for students, in line with their potential and aspirations, taking into account the diversity of learning styles and abilities.	F	
14.	I.P.B.4.1.1 The organisational component provides students, including those with special educational needs/disabilities, with access to resources and services designed to support the learning process, adequate for the individual learning needs, the study domain, the study cycle, and the form of organisation of the study programme.	F	
15.	I.P.B.5.1.1 Learning outcomes are adequately described, and they support understanding of the students' and teachers' expectations regarding the content of the subject matters in the curriculum.	F	
16.	I.P.B.5.1.2 Achievement of the learning outcomes is checked in ongoing examinations and study completion exams.	F	
17.	I.P.B.7.1.1 The organisational component applies the admission procedures.	F	
18.	I.P.B.7.1.2 Admission in higher education study programmes complies with the principles of fairness and equal opportunities, and with the establishing of support measures to ensure access of vulnerable groups at social and educational risk, including candidates with special educational needs and/or disabilities.	F	
19.	I.P.B.7.2.1 The organisational component applies the regulations concerning the students' professional activity.	F	
20.	I.P.B.8.1.1 The organisational component carries out international cooperation actions supporting mobility of the members of its own community and collaboration in academic and research activities.	F	A strategy with clear goals for international cooperations in the field of SDM should be developed. On the level of PhD studies cooperations will only work if there exist shared research interests and outgoing students are supervised at the partner university. As many PhD students for private reasons do not have the possibility to go abroad, strengthen internationalization "at home". Especially in Mathematics it should not be a problem to offer courses within the training program given in English language and look for international co-advisors. All regulations concerning the PhD Program Mathematics should be published in English and easy to find placed on the homepage of UTCN.

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
21.	I.P.B.9.1.1 Learning based on scientific investigation and research results support and are capitalised upon in achieving the learning outcomes envisaged through the study programme.	F	
22.	I.P.B.9.2.1 The results of scientific research are visible at national and international level in that scientific domain, and capitalised upon in an adequate manner.	F	The training program for PhD students should be extended by the inclusion of doctoral seminars, where the students learn and practice the presentation of their scientific results in English language.
DOMAIN C. Quality management			
23.	I.P.C.1.1.1 The organisational component consistently applies the procedures, and proves their impact on quality assurance.	F	Observe that bureaucratic burden does not superimpose the benefits of evaluation procedures. Make results and consequences of evaluations visible for all members of UTCN. Simplify procedures as much as possible and consider evaluation procedures as a unique chance for discussions on the future of the organization.
24.	I.P.C.1.2.1 The opinions of the members of its own community and of other stakeholders are taken into account in the procedure implementation process.	F	Improve the involvement of external stakeholders (employers) by defining fixed procedures for soliciting their opinion.
25.	I.P.C.2.2.2. The academic ethics commission operates based on the regulation approved by the University Senate, and performs actions that are compliant with the law, independently from any other structure or person in the higher education institution.	F	
26.	I.P.C.3.1.1 The organisational component consistently applies the procedures, and proves their impact on quality assurance.	F	
27.	I.P.C.3.1.2 Members of its own community and other stakeholders are involved in the procedure implementation process.	F	Establish fixed procedures for the involvement of international partners and employers into the further development of the PhD Program Mathematics.
28.	I.P.C.4.1.1 The organisational component analyses the results of the students' biannual evaluation of teachers.	F	Students should be encouraged to take a more active role in quality improvement procedures by making the benefits of QA for teaching more transparent.

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
29.	I.P.C.5.1.1 The organisational component systematically collects and analyses data required for the internal quality assurance process.	F	
30.	I.P.C.6.1.1 The organisational component ensures publication and access to information of public interest regarding the evaluated study programme.	F	
31.	I.P.C.6.1.2 The organisational component ensures transparent decision-making processes.	F	
32.	I.P.C.8.1.1 The organisational component carries out the procedures pertaining to the external quality evaluation process, aiming to organise the evaluated study programme as provided by the law.	F	

Summary Table of Performance Indicators – Degree of Fulfillment

Evaluation Domain	Number of Performance Indicators		
	Fulfilled	Partially fulfilled	Unfulfilled
Domain A. Institutional capacity	8	0	0
Domain B. Educational efficacy	14	0	0
Domain C. Quality management	10	0	0
Total	32	0	0

Other, general recommendations that were not given within the analysis of a specific performance indicator can be presented here.

Sum up the number of analysed performance indicators, and specify how many were assessed as fulfilled, partially fulfilled, and unfulfilled, if any.

VI. Conclusions

A number of important aspects noted during the evaluation are reiterated here, and general conclusions are made about the quality of education delivered within the evaluated doctoral study domain.

Propose and substantiate a decision.

Following the completion of the accreditation/maintaining accreditation procedure, the decision of the evaluation panel shall be one of the following:*

- accreditation*** (AC)/**maintaining accreditation** (MAC);
- conditional maintaining of the provisional authorisation to operate*** (CMPA)/**conditional maintaining of accreditation** (CMAC);
- non-accreditation*** (NAC)/**withdrawal of the accreditation** (WAC).

* When the external quality evaluation for accreditation is performed with undergoing the procedure for obtaining a provisional authorisation to operate.



The Doctoral Programme Mathematics is part of the UTCN Doctoral School. All legal requirements (ARACIS performance indicators and Romanian legislation) concerning doctoral studies in Romania are fulfilled. Although, as is often the case in mathematics, there are only few students, Doctoral studies in Mathematics at UTCN are important for the institution and the region. The Doctoral Programme Mathematics is very well organized and permanently improved. The teachers are internationally recognized experts. The infrastructure is suitable and up-to-date.

We would also like to suggest strengthening internationalization in the field of Doctoral Studies in Mathematics and consider an expansion of research areas to include also applied topics. PhD graduates in applied mathematics are wanted specialists in economy. Doctoral students in Mathematics could benefit from grants coming from applied research income.

Following the periodic evaluation procedure, the site visit, and the preparation of the External Evaluation Report (REE), it was determined that all performance indicators have been met. Therefore, **we strongly recommend Maintaining Accreditation (MAC)**.

VII. Annexes

1. Schedule of the site visit;
2. Minutes of the meetings held during the site visit.



Calendarul vizitei de evaluare externă a calității
domeniului de studii universitare de doctorat/ The timetable for the evaluation of the external quality evaluation visit
for the doctoral university study domain

Intervalul orar/ <i>Hour</i>	Activități de evaluare/ <i>Evaluation activities</i>	Participanți/ <i>Participants</i>	Locație/ <i>Location</i> /Listă participanți/ <i>List of Participants</i>
Luni/ <i>Monday</i> , 27.07.2026			
17:30-19:00	Discuții în cadrul comisiei de experți în evaluarea externă a calității, stabilirea detaliilor vizitei/ <i>Discussions within the expert committee for external quality evaluation, fixing the details of the evaluation visit</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i>	Sala/Locația/ Room/Location Baritiu nr 25 Sala198/Room198
Marți/ <i>Tuesday</i> , 28.07.2026			
8:30 - 9:00	Întâlnirea preliminară a comisiei de experți evaluatori / <i>Preliminary meeting of the expert evaluation panel</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198
9:00-10:20	Întâlnirea comisiei de experți în evaluarea externă a calității cu reprezentanții conducerii componentei organizatorice și cu echipa care a realizat raportul de evaluare internă (REI)/ <i>Meeting of the external quality evaluation experts' panel with the representatives of the management of the organisational component and with the team that has drafted the internal evaluation report</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Reprezentanți ai conducerii componentei organizatorice aferente domeniului de studii de doctorat evaluat/ <i>Representatives of the management of the organisational component</i> - Persoana de contact/ <i>Contact person</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198 Lista persoanelor care vor participa la întâlnire/ <i>List of participants attending the meeting:</i> - Prof. dr.ing. F. O., prorector științific/ <i>Professor F. O., PhD, scientific vice-rector</i> -Prof. dr.ing. D. P., director CSUD/ <i>Professor D. P., PhD, director of the Council for Doctoral University Studies CSUD</i>



Intervalul orar/ <i>Hour</i>	Activități de evaluare/ <i>Evaluation activities</i>	Participanți/ <i>Participants</i>	Locație/ <i>Location</i> /Listă participanți/ <i>List of Participants</i>
			- Prof. dr.ing. P. D., director Școală Doctorală UTCN/<i>Professor P. D., PhD. director of the TUCN's Doctoral School</i> Prof.dr.mat. I. R. P.– conducător de doctorat, membru CSUD, coordonator al Consiliul de coordonare a programelor doctorale Științe Aplicate/Matematica/<i>Professor I. R. P., PhD, PhD advisor, coordinator of the Coordination Council of Doctoral Programs in Applied Sciences/Mathematics, member of the Council for Doctoral University Studies CSUD</i> -Prof Dr. Mat. P. D., Head of Department of Mathematics -Prof. Dr. Mat. D.C. - conducător de doctorat, membru al Consiliului de coordonare a programelor doctorale Matematica/ <i>Professor D. C., PhD, PhD advisor, member of the Coordination Council of Doctoral Programs Applied Sciences/Mathematics</i>
10:20- 10:30	Pauză/ <i>Break</i>		
10:30 – 11:15	Întâlnirea comisiei de experți în evaluarea externă a calității cu membri ai Comisiei de etică universitară/ <i>Meeting of the experts panel with members of the University Ethics Committee</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198 Sl. dr. ing. R. O. Membru al Comisiei de etică universitară/ <i>Member of the University Ethics Committee</i>



Intervalul orar/ <i>Hour</i>	Activități de evaluare/ <i>Evaluation activities</i>	Participanți/ <i>Participants</i>	Locație/ <i>Location</i> /Listă participanți/ <i>List of Participants</i>
		- Membri ai Comisiei de etică universitară/ <i>Members of the University Ethics Committee</i>	
11:15-11:50	Întâlnirea tehnică a comisiei de experți evaluatori (Activitate în colaborare pentru clarificarea aspectelor prezentate în REI)/ <i>Technical meeting of the expert evaluation panel (Collaborative activity for clarifying the aspects presented in the Internal Evaluation Report - IER)</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198
11:50-12:00	Pauză/ <i>Break</i>		
12:00-13:00	Întâlnirea comisiei de experți în evaluarea externă a calității cu personalul didactic implicat în activitățile din cadrul DSUD/ <i>Meeting of the external quality evaluation experts' panel with the teaching staff involved in the activities within the DSUD</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Cadre didactice conducători de doctorat/ <i>Teaching staff who are PhD supervisors</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198 Lista persoanelor care vor participa la întâlnire/ <i>List of participants attending the meeting::</i> - Prof. univ. dr. I.R. P. - Prof. univ. dr. P. D. - Prof. univ. dr. B. V. - Prof. univ. dr. R. I. - Prof. univ. dr. T. C. - Prof. Univ. dr. R. D. - Prof. Univ. dr. S.L. - Prof. Univ. dr. I. D.
13:00 -14:30	Pauză de prânz/ <i>Lunch</i>		
14:30-15:20	Întâlnirea comisiei de experți în evaluarea externă a calității cu reprezentanți ai structurilor organizatorice în domeniul asigurării calității/	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198



Intervalul orar/ <i>Hour</i>	Activități de evaluare/ <i>Evaluation activities</i>	Participanți/ <i>Participants</i>	Locație/ <i>Location</i> /Listă participanți/ <i>List of Participants</i>
	<i>Meeting of the external quality evaluation experts' panel with representatives of the quality assurance organisational structures</i>	- Reprezentanți ai structurilor organizatorice în domeniul asigurării calității/ <i>Representatives of quality assurance organisational structures</i>	- Prof.dr.ing. D. P./ prorector Management universitar și relația cu mediul socio-economic, președinte comisia CEAC/vice rector for Relations with the socio-economic environment, <i>Chair of the Quality Assurance and Evaluation Committee (CEAC)</i> - ing. R. B./ director Departamentul pentru Asigurarea Calității/ <i>director of the Quality Insurance Department</i> - Prof. dr.ing. P. D., director Școală Doctorală UTCN/ <i>Professor P. D., PhD, director of the TUCN's Doctoral School</i> - Prof.dr.ing. I. R. P. - membru CSUD, coordonator al Consiliul de coordonare a programelor doctorale Matematica/, <i>coordinator of the Coordination Council of Doctoral Programs in Mathematics</i> - L. F., DSUD/secretary, DSUD
15:20-15:30	Pauză/ <i>Break</i>		
15:30-16:30	Întâlnirea comisiei de experți în evaluarea externă a calității cu studenți ¹ doctoranzi din cadrul DSUD/ <i>Meeting of the external quality evaluation experts' panel with doctoral students of the DSUD</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Studenți doctoranzi/ <i>Doctoral students</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198 -drd. P. R., year 1 -drd. C. C., year 2 -drd. S (C) M

¹ Nu este obligatorie în cazul autorizării domeniilor de studii universitare de doctorat/ It is not mandatory in the case of authorization of doctoral university study domain.



Intervalul orar/ <i>Hour</i>	Activități de evaluare/ <i>Evaluation activities</i>	Participanți/ <i>Participants</i>	Locație/ <i>Location</i> /Listă participanți/ <i>List of Participants</i>
16:30 -17:20	Întâlnirea comisiei de experți în evaluarea externă a calității cu absolvenți ^{2,3} ai DSUD/ <i>Meeting of the external quality evaluation experts' panel with alumni⁴ of the DSUD</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Absolvenți ai domeniului de studii evaluat/ <i>Graduates</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198 Cercetator St. 2, M (cas. B) G.-Institutul Astronomic Cluj-Napoca; Asistent dr. M A, Dept. Matematica, Universitatea Tehnica din Cluj-Napoca
17:20 -17:30	Pauză / <i>Break</i>		
17:30 -18:10	Întâlnirea comisiei de experți în evaluarea externă a calității cu angajatori ai absolvenților DSUD/ <i>Meeting of the external quality evaluation experts' panel with employers⁵ of the DSUD alumni</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Angajatori/ <i>Employers</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198 - Prof. Dr. Ing. V. M., decan Facultatea de Automatica si calculatoare/ Dean Faculty of Automatics and Computer Science - Cerc. Stiintific. I, C. G. director, Institutul de Calcul "Tiberiu Popoviciu" (ICTP)
18:10- 19:00	Ședință de lucru a comisiei de experți evaluatori (Activitate în colaborare pentru discutarea unor aspecte din REI legate de rezultatele discuțiilor din cadrul întâlnirilor avute)/ <i>Technical meeting of the expert evaluation panel (Collaborative activity for discussing some aspects presented in the IER, related to the previous meetings)</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198
Miercuri/ <i>Wednesday</i> , 29.07.2026			

² Se va evita invitarea absolvenților care sunt angajați ai ÎIS sau ai OFE, după caz.

³ Nu este obligatorie în cazul autorizării domeniilor de studii universitare de doctorat

⁴ Avoid inviting alumni who are also staff of the HEI or members of the Romanian Academy, as applicable.

⁵ Avoid inviting employers who are also staff of the HEI or members of the Romanian Academy, as applicable.



Intervalul orar/ <i>Hour</i>	Activități de evaluare/ <i>Evaluation activities</i>	Participanți/ <i>Participants</i>	Locație/ <i>Location</i> /Listă participanți/ <i>List of Participants</i>
9:00-10:00	Întâlnirea tehnică a comisiei de experți evaluatori (Activitate în colaborare pentru clarificarea altor aspectelor prezentate în REI)/ <i>Technical meeting of the expert evaluation panel (Collaborative activity for clarifying some other aspects presented in the Internal Evaluation Report - IER)</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198
10:00 - 10:50	Vizitarea bazei materiale/ <i>Visiting the material resources</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Reprezentanți ai instituției sau Academiei Române, după caz/ <i>Representatives of the HEI or the Romanian Academy, as applicable</i>	Salile 197, 198 (Laborator de calcul numeric) , 286 Institutul de Inteligență artificială AIRI UTCN/ <i>Artificial Intelligence Research Institute – P. I. R., P. D.</i>
10:50-11:00	Pauză / <i>Break</i>		
11:00-11:50	Întâlnirea comisiei de experți în evaluarea externă a calității cu responsabilii centrelor/laboratoarelor de cercetare / <i>Meeting of the external quality evaluation experts' panel with the staff in charge with the research centres/laboratories</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Responsabilii centrelor/laboratoarelor de cercetare/ <i>Staff in charge with research centres/laboratories</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198
11:50:12:00	Pauză / <i>Break</i>		
12:00-13:00	Întâlnirea comisiei de experți în evaluarea externă a calității cu reprezentanți ai conducerii componentei organizatorice/persoana de contact/reprezentanți ai CEAC/reprezentanți ai structurilor organizatorice în domeniul asigurării	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Reprezentanți ai conducerii / reprezentanți ai CEAC / reprezentanți ai structurilor organizatorice în domeniul asigurării calității/ <i>Representatives of the management / representatives of the</i>	Sala/Locația/ Room/Location. Baritiu nr 25 Sala198/Room198 - Prof. dr. ing. P. D., director Școală Doctorală UTCN/ <i>Professor P. D., PhD, director of the TUCN's Doctoral School</i> -Prof Dr. Mat. P. D., Head of Department of Mathematics



Intervalul orar/ <i>Hour</i>	Activități de evaluare/ <i>Evaluation activities</i>	Participanți/ <i>Participants</i>	Locație/ <i>Location</i> /Listă participanți/ <i>List of Participants</i>
	calității ⁶ / <i>Meeting of the external quality evaluation experts' panel with representatives of the organisational component / contact person / representatives of the CEAC / representatives of quality assurance organisational structures</i>	<i>CEAC / representatives of the quality assurance organisational structures</i> - Persoana de contact/ <i>Contact person</i>	- Prof. dr. I. R. P. - membru CSUD, coordonator al Consiliul de coordonare a programelor doctorale Matematica/, <i>coordinator of the Coordination Council of Doctoral Programs in Mathematics</i> - L. F., DSUD/secretary, DSUD
13:00 -14:00	Pauză de prânz/ <i>Lunch</i>		
14:00 - 15:00	Finalizarea activităților de evaluare/ <i>Completion of evaluation activities</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i>	Sala/Locația/ <i>Room/Location</i> . Baritiu nr 25 Sala198/Room198
15:00-16:00	Întâlnirea membrilor comisiei de experți evaluatori cu reprezentanții conducerii ÎIS sau a OFE, după caz și ai conducerii componentei organizatorice pentru comunicarea concluziilor procesului de evaluare/ <i>Meeting of the members of the expert evaluators' panel with representatives of the management of the HEI or the EP, as applicable, and management of the organisational component, to communicate the conclusions of the evaluation process</i>	- Comisia de experți evaluatori ai ARACIS/ <i>Panel members</i> - Reprezentanți ai conducerii și ai domeniului de studii evaluat/ <i>Representatives of the management</i> - Persoana de contact/ <i>Contact person</i>	Sala/Locația/ <i>Room/Location</i> . Baritiu nr 25 Sala198/Room198 Lista persoanelor care vor participa la întâlnire/ <i>List of participants attending the meeting:</i> - Prof. dr.ing. D. P., director CSUD/ <i>Professor D. P., PhD, director of the Council for Doctoral University Studies CSUD</i> Prof.dr.mat. Ioan Radu Peter– conducător de doctorat, membru CSUD, coordonator al Consiliul de coordonare a programelor doctorale Științe Aplicate/Matematica/ <i>Professor I. R. P. PhD, PhD advisor, coordinator of the Coordination Council of Doctoral Programs</i>

⁶ Clarificarea unor aspecte rezultate din activitățile și discuțiile desfășurate pe parcursul efectuării vizitei, dacă se impune



Intervalul orar/ <i>Hour</i>	Activități de evaluare/ <i>Evaluation activities</i>	Participanți/ <i>Participants</i>	Locație/ <i>Location</i> /Listă participanți/ <i>List of Participants</i>
			<i>in Applied Sciences/Mathematics, member of the Council for Doctoral University Studies CSUD</i> -Prof Dr. Mat. P. D. , Head of Department of Mathematics -Prof. Dr. Mat. D. C. - conducător de doctorat, membru al Consiliului de coordonare a programelor doctorale Matematica/ Professor D. C. , <i>PhD, PhD advisor, member of the Coordination Council of Doctoral Programs Applied Sciences/Mathematics</i>

If deemed necessary, and depending on the type of doctoral program being evaluated, additional meetings may also take place, for example with representatives of:

- departments providing IT support, for instance regarding the organization of online activities
- departments for international relations and student mobility
- the Counseling and Career Guidance Center, etc.