



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

Higher Education Institution/Education Provider Organization:	Lucian Blaga University of Sibiu
Doctoral School:	Doctoral School of Engineering Sciences and Mathematics
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.	Adela-Gabriela MIHAI	Expert evaluator	
2.	Parascovia SÎRBU	International Expert	
3.	Victor MALAIRĂU	PhD Student Evaluator	

I. Introduction

The context in which the external evaluation report was drafted:

This external evaluation report (EER) was prepared following the request for periodic evaluation for the purpose of maintaining accreditation for the Mathematics doctoral program at the Doctoral School of Engineering Sciences and Mathematics, Lucian Blaga University of Sibiu. The evaluation period, including the preparation and conduct of the on-site visit and the completion of the EER at the level of the external evaluation committee, covers the interval March 5 - May 28, 2026, also including the on-site visit, which took place during May 11-12, 2026.

The external evaluation committee was composed of MIHAI Adela – Gabriela – Expert Evaluator, SÎRBU Parascovia - International Expert, MALAIRĂU Victor - PhD Student Evaluator.

Description of the higher education institution:

Lucian Blaga University of Sibiu (ULBS) is a public, non-profit higher education institution established by Romanian Government Decision No. 225/1990. It operates in accordance with the Romanian Constitution, the Higher Education Law, the University Charter, and other relevant regulations, under the principle of university autonomy. The institution is primarily funded from the state budget, while also generating and managing its own revenues in line with legal provisions. The university's origins date to 1976, with the establishment of the Institute of Higher Education in Sibiu by State Council Decree No. 203/30.06.1976, initially comprising faculties of Philology and History, Economic and Administrative Law, and Mechanics. Since 1990, ULBS has developed into a multidisciplinary institution integrated within the European higher education area. ULBS is a comprehensive university comprising nine faculties, including two engineering faculties and seven faculties covering fields such as humanities, sciences, economics, law, medicine, and theology. In the 2024–2025 academic year, the university enrolls 14,736 students, including 11,488 undergraduates, 2,777 master's students, and 471 doctoral candidates across 16 doctoral programs.

Following the institutional evaluation conducted by ARACIS in 2021, ULBS was awarded the highest rating, "High Degree of Confidence," and retained its accreditation for doctoral studies in accordance with OME No. 5498/2021 and OME No. 6067/2022.

The management structure of ULBS complies with current legal provisions and ensures transparent, participatory governance. It comprises the Rector, four Vice-Rectors responsible for key strategic areas, and the Director of the Council for Doctoral Studies (CSUD). The university's organizational structure includes nine faculties, 24 teaching departments, six doctoral schools, and the Center for Distance Learning and Part-Time Education (IDIFR), subordinated to the Vice-Rector for Academic Affairs. ULBS pursues the consolidation of a modern, multidisciplinary, and multicultural institutional profile, supported by efficient resource management and strategic national and international partnerships.

Doctoral studies at ULBS are organized within accredited doctoral programs offered by doctoral schools under the authority of IOSUD-ULBS, in accordance with Ministerial Order No. 5498/2021. The activity of IOSUD is coordinated by the Council for Doctoral Studies (CSUD) and carried out within the university's doctoral schools. Following the ARACIS evaluation in 2021, an Action Plan approved by the ULBS Senate included the reorganization of the interdisciplinary doctoral school to improve the management of the 15 doctoral fields previously administered within a single structure. Consequently, by Senate Decision No. 1211/31.03.2021, the organizational structure was revised. At present, IOSUD-ULBS comprises six doctoral schools: Engineering and Mathematics; Social Sciences; Philology and History; Theatre and Performing Arts; Theology; and Medicine.

A request for the approval of the revised organizational structure of IOSUD-ULBS was submitted to the Ministry of Education and subsequently to UEFISCDI, being approved by Ministerial Order No. 6067/10.10.2022. IOSUD activity is coordinated by the Council for Doctoral Studies (CSUD), composed

of 11 members: the CSUD Director, seven PhD supervisors elected by their peers, and three doctoral students elected by the doctoral student body, in accordance with the applicable methodology. The CSUD Director is appointed following a public competition organized by the university, based on the relevant institutional methodology. The Council typically meets monthly, according to a schedule established at the beginning of the academic year, and its decisions are made public on its official website.

General description of the doctoral study domain:

General description of the Doctoral School of Engineering Sciences and Mathematics

The Doctoral School of Engineering Sciences and Mathematics (SDSIM) is governed by the Council of the Doctoral School (CSDSIM), composed of four members: the Director, one doctoral supervisor from IOSUD-ULBS, one external scientific representative, and one doctoral student representative. SDSIM currently organizes doctoral studies in five fields: Computers and Information Technology, Industrial Engineering, Mechanical Engineering, Engineering and Management, and Mathematics, all of which maintained accreditation following the 2021 external evaluation. The mission of SDSIM-ULBS is to train highly qualified researchers and specialists capable of performing at an advanced level in both scientific research and professional practice, facilitating their integration into the labor market. Its main objectives include ensuring high-quality doctoral training, promoting interdisciplinary research approaches, upholding rigorous ethical standards in research and publication, and contributing expertise to the wider community. As of 1 October 2025, SDSIM-ULBS comprises 22 doctoral supervisors. Over the past five years, a total of 29 doctoral degrees have been awarded by the CNATDCU General Council in the fundamental fields of Engineering Sciences (28) and Mathematics and Natural Sciences (1), across the five doctoral domains of the school. Currently, 78 doctoral students are enrolled.

General description of the field of doctoral studies Mathematics

Since 1990, Lucian Blaga University of Sibiu has offered doctoral programs and conducted research across six fundamental fields: humanities, engineering, economics, law, medical sciences, and theology, continuing the longstanding academic tradition of higher education in Sibiu. The doctoral program in Mathematics, established in 2019, operates within the regulatory framework of ULBS doctoral studies, as approved by Senate Decision No. 3409/27.06.2024. In accordance with these regulations, doctoral schools may encompass one or more fields, each coordinated by a field coordinator appointed by the Rector upon the proposal of the CSUD. The field coordinator contributes to the development of the doctoral curriculum and staffing structure, chairs the admissions committee, and oversees compliance with accreditation standards, including the preparation of evaluation and progress reports. The mission of the doctoral program subject to periodic evaluation is to train and develop doctors in the field of Mathematics, capable of working at the highest levels in both scientific research and teaching in higher education, ensuring the insertion into the labor market of human resources competent in scientific research and with rich professional experience, accumulated through the awarding of the title and diploma of doctor. In order to fulfill the mission assumed within the doctoral program in Mathematics, objectives are considered, as enumerated in IER.

The curriculum of doctoral programs is aligned with that of leading international universities and reflects both national priorities and global research standards. Research topics must demonstrate international relevance or, where nationally focused, adhere to internationally recognized methodologies. Program outcomes are expected to achieve international visibility and impact. Each doctoral program is supervised by a doctoral advisor and comprises two components: an advanced university training program and an individual research or artistic creation program.

Doctoral studies develop both specialized (cognitive, content, and research) competencies and transversal skills through the completion of curricular activities. During the first year, doctoral students undertake coursework in 4–5 disciplines within the advanced training program, the successful completion of which confers 30 transferable credits. The advanced training program is carried out in accordance with the approved curriculum and the discipline files posted on the website

<http://doctorate.ulbsibiu.ro/cursuri.php> as follows: Fundamental field: Mathematics and Natural Sciences; Doctoral field: Mathematics; Subjects: Academic ethics and integrity, Scientific research methodology: engineering, exact sciences, and life sciences, Functional analysis and applications in linear operator theory, Probabilistic methods in approximation theory.

IOSUD-ULBS organizes/supports participation in courses, workshops, and other activities for doctoral students to develop professional and cross-disciplinary skills.

As part of the individual scientific research program, the doctoral student benefits from the guidance of an academic guidance and integrity committee composed of the doctoral supervisor and four other members, specialists from the doctoral supervisor's research team or from the field of research proposed in the doctoral thesis, at least one of whom is from outside IOSUD-ULBS. In order to ensure the highest possible quality of doctoral theses, the academic guidance and integrity committees are composed in such a way as to ensure the necessary competence in the field of research. The professional and transversal skills acquired through doctoral programs are enumerated in IER.

Doctoral supervisors are teaching staff with experience in scientific research who coordinate the work of doctoral students after acquiring this right in accordance with the legal regulations in force. The current situation of doctoral supervisors in the field of Mathematics is as follows: Prof. Ana Maria Acu, Prof. Nicolae Secelean, Prof. Laurian Suci, with a total of 4 PhD students under their supervision. Doctoral students are admitted based on the Regulations for admission to doctoral studies, updated and approved annually by the ULBS Senate.

The evolution of the number of doctoral students admitted in the field of Mathematics, between 2021/2022 and 2025/2026, is, in total, respectively: 1,1,3,5,5. During the period under review, no doctoral degrees were awarded, and only one thesis (Pașca Vlad) was defended, which is awaiting approval by CNATDCU.

Lucian Blaga University of Sibiu hosts the accredited Research Center for Mathematics and Applications, which maintains its own website and collaborates with researchers from Romania and abroad. The Center provides dedicated research infrastructure supporting doctoral students in the development of their scientific research activities. Additionally, doctoral students benefit from access to relevant academic resources and databases, including those made available through the Anelis Plus program, facilitating the effective conduct of their research.

In conclusion, since the most recent external quality evaluation, the doctoral field of Mathematics has undergone significant curricular and organizational developments. These include the revision of the curriculum in line with current regulations and labor market requirements, the alignment of course descriptions with ARACIS standards and international best practices, the modernization of educational infrastructure, the strengthening of academic support structures, and the expansion of international cooperation through Erasmus+ agreements and participation in research projects and academic events.

The doctoral field in Mathematics is administered by the Doctoral School of Engineering Sciences and Mathematics, spans four years, and comprises 240 ECTS credits, leading to a level 8 qualification in the EQF/CEC and CNC frameworks. Future development priorities include diversifying research areas, attracting new doctoral supervisors and international doctoral candidates, strengthening partnerships with socio-economic stakeholders, and promoting doctoral studies among master's graduates and professionals. Through these measures, the Mathematics doctoral program aims to enhance its academic relevance, ensuring a high-quality, ethically grounded, and student-centered research environment.

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);
- On-site visit (general list of visited locations and categories of persons with whom debates have been organised);
- Other relevant methods or aspects.

For the preparation of this external evaluation report, data from the internal evaluation report (IER) were used by consulting its annexes, as well as from additional documents requested by the members of the external evaluation committee, documents made available by the contact person at Lucian Blaga University of Sibiu through uploading on the ARACIS platform. The on-site visit and the meetings organized on this occasion, according to the established schedule, allowed these data to be supplemented with much more up-to-date information (see the minutes prepared).

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.

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

Within ULSB, there are organizational, professional, and administrative structures appropriate to a public higher education institution, as well as a dynamic, efficient, and transparent management system. Their operation is based on clearly defined competencies and specific responsibilities, each governed by its own organizational and operational regulations, internal procedures, methodologies, and rules, which are periodically reviewed in accordance with the national legal framework and ULSB internal regulations. The organization and functioning of the managerial structures and positions within ULSB, the procedures for their appointment, as well as the exercise of their mandates, competencies, and responsibilities, are clearly defined.

The activity of IOSUD-ULBS, including the organization of doctoral studies in Mathematics, is supported by a structured management framework governed by regularly updated methodologies, regulations, and procedures. The coherence and efficiency of academic and administrative processes are ensured through key institutional documents, including the organizational chart, Rules of Procedure, operational regulations for institutional structures, regulations on doctoral studies, specific regulations of the Doctoral School of Engineering Sciences and Mathematics, and procedures governing the election of management structures. The staff structure of the organizational component includes doctoral supervisors, guidance and academic integrity committees, and doctoral supervisors involved in the advanced university training program.

- ✓ 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 analysis of these documents indicates that they establish a stable and coherent organizational framework supporting the effective conduct of doctoral studies. Through the consistent application of internal methodologies, regulations, and procedures, IOSUD-ULBS ensures continuity in academic activities while maintaining the flexibility required to adapt to evolving educational standards, quality requirements, and labor market dynamics.

✓ Aspects that constitute best practice examples

Strengthening the alignment of internal regulations with labor market developments through the continuous updating of doctoral supervisors' responsibilities, in accordance with digitalization trends and emerging educational requirements. The IOSUD-ULBS has the target of enhancing the clarity, transparency, and predictability of procedures and mechanisms governing doctoral studies.

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)

IOSUD-ULBS places significant emphasis on stakeholder engagement in the development and revision of its methodologies, regulations, and procedures. The consultative process involves doctoral students, doctoral supervisors, members of academic guidance and integrity committees, thesis defense committees, doctoral graduates, and other relevant stakeholders. Their input is incorporated through both formal and informal consultation mechanisms, ensuring transparency and active participation in institutional decision-making.

This participatory approach is supported by a comprehensive set of institutional documents, including the University Charter, the ULBS Rules of Procedure, the operational regulations of the Faculty Councils and the University Senate, the Regulations for the organization and conduct of doctoral studies within IOSUD-ULBS, the institutional strategy, the Rector's annual report, and the reports of the CSUD Director. These instruments collectively contribute to a transparent, inclusive, and well-regulated framework for the effective governance of doctoral 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 analysis of supporting documents indicates that the perspectives of doctoral students, doctoral supervisors, and members of academic guidance and integrity committees are incorporated into the development and revision of methodologies, regulations, and procedures, within the limits established by the applicable legal provisions. Stakeholder involvement is further reflected in the process of proposing research topics for doctoral programs, particularly in the annual selection of topics for vacant doctoral positions. This approach supports alignment with academic priorities and ensures

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

responsiveness to developments within the field. At ULBS, specific questionnaires have been developed and periodic meetings are organized to collect, process, and analyze feedback from members of the Doctoral School, students, and representatives of the socio-economic environment. To ensure effective feedback utilization, the results of these consultations are systematically analyzed and documented in reports on academic and administrative management, which are subsequently reflected in the university's annual strategic and operational plans. The outcomes of these processes are reflected in PhD student course evaluations, peer reviews, and ongoing internal monitoring activities.

✓ Aspects that constitute best practice examples

Future actions at IOSUD-ULBS will focus on strengthening and systematizing stakeholder engagement. This includes the formalization and expansion of consultation processes with external stakeholders through periodic surveys, focus groups, and thematic consultations involving employers and academic staff engaged in doctoral teaching activities. In addition, efforts will be directed toward the development of an integrated digital mechanism for the centralized collection and analysis of feedback at all institutional levels. These measures aim to improve transparency, responsiveness, and the overall quality of doctoral education governance.

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)

IOSUD-ULBS provides the necessary infrastructure to support teaching, research, and administrative activities, as well as dedicated facilities for students, doctoral candidates, and trainees, ensuring an appropriate environment for academic development and social integration. The available spaces are adequately equipped, including accessibility features for individuals with disabilities, and offer suitable conditions for teaching, research, and administrative staff. Compliance with institutional requirements is supported by key elements, including the foundational and regulatory documents governing ULBS, the university's asset base, and the status of facilities designated for educational, research, social, sports, and cultural purposes. Additionally, the infrastructure benefits from appropriate equipment and comprehensive learning resources, such as library collections, access to academic databases, and specialized software. The structure of teaching, research, and related activity spaces, classified according to their legal status, is detailed in the Institutional Evaluation Report (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

IOSUD-ULBS provides adequate infrastructure to support teaching, research, and administrative activities, as well as dedicated facilities for students, doctoral candidates, and trainees. These resources ensure an appropriate environment for academic development, research activities, and social integration. The available spaces are properly equipped, including accessibility features for persons

with disabilities, and offer optimal conditions for academic and administrative staff, such as modern classrooms, laboratories, libraries, access to specialized databases, and educational software. The research infrastructure of the Doctoral School of Engineering Sciences and Mathematics is supported by the faculties' facilities, the university library, and accredited research centers within ULBS. Through the Faculty of Sciences, the Doctoral School ensures the efficient management and maintenance of both immovable and movable assets required for teaching, research, and administrative functions. Infrastructure maintenance is supported by dedicated budget allocations and ongoing activities, including repairs, cleaning, and modernization. The facilities are safe, functional, and aligned with current research standards, contributing to a modern and secure academic environment that is currently undergoing further development and modernization.

✓ Aspects that constitute best practice examples

Modernization and energy efficiency of infrastructure; expansion of facilities for doctoral students and digitization of services.

✓ Recommendations

One recommends to ensure complete equipment for hybrid education; increased accessibility for people with disabilities.

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)

In line with the principles of efficient and sustainable resource management, the Faculty of Sciences, including activities related to doctoral studies in Mathematics, ensures the appropriate administration of immovable and movable assets used in both advanced training programs and individual research activities. These resources are consistently maintained to provide optimal conditions for study, research, and academic work, thereby supporting the effective functioning of university processes and fostering a safe and attractive educational environment. Investment planning, financial resource allocation, and infrastructure management are guided by key institutional documents, including the ULBS financial statements (balance sheet and annual income and expenditure budget) and the Institutional Development Strategy, which incorporates the investment plan.

The Doctoral School of Engineering Sciences and Mathematics, through the Faculty of Sciences, ensures the efficient and coherent management of infrastructure required for teaching, research, and administrative activities. Facilities and equipment are maintained through dedicated budget allocations and regular maintenance activities, including repairs, cleaning, and modernization. The infrastructure is safe, functional, and aligned with current research requirements, contributing to a modern academic environment that continues to undergo restoration and development.

✓ 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

During the on-site visit, including the inspection of educational facilities, it was observed that the immovable and movable assets of the Faculty of Sciences are very well maintained. This is ensured through the careful supervision of technical and administrative staff, whose responsibilities explicitly include the upkeep of these assets. As a result, optimal conditions are provided for study, teaching, and research activities for both students and academic staff.

✓ Aspects that constitute best practice examples

As an example of good practice, it was particularly appreciated that the educational spaces (the Center for Research in Mathematics and Applications – Room A14) allocated to the doctoral program are well organized and maintained, contributing to a high-quality academic environment. Most of the spaces where doctoral students carry out their activities, including a number of co-working spaces, are completely renovated in collaboration with the institution's partners.

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.
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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)

IOSUD-ULBS ensures the provision of qualified human resources for the effective conduct of doctoral studies in Mathematics. Doctoral supervisors are affiliated with the Doctoral School of Engineering Sciences and Mathematics following the award of the habilitation certificate, in accordance with institutional regulations governing doctoral studies and doctoral school activities. The habilitation process is conducted in compliance with the applicable national regulations and the IOSUD-ULBS methodology for granting the habilitation certificate. Teaching activities within the advanced university training program are delivered by doctoral supervisors who meet the mandatory standards required for habilitation. The advanced training curriculum includes disciplines such as Academic Ethics and Integrity, Scientific Research Methodology (engineering, exact sciences, and life sciences), Functional Analysis and Applications in Linear Operator Theory, and Probabilistic Methods in Approximation Theory.

The individual research program of each doctoral student is supervised by the doctoral advisor in collaboration with an academic guidance and integrity committee. This committee typically includes members of the supervisor's research team, as well as internal or external specialists, ensuring both institutional and inter-institutional collaboration. Compliance with habilitation standards is documented in the relevant institutional annexes. IOSUD-ULBS continuously supports academic staff in obtaining habilitation and affiliating with the Doctoral School, thereby strengthening the human resource base of the Mathematics doctoral program.

✓ 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 PhD Supervisors from the domain Mathematics possess the necessary qualifications and professional competencies to teach the subjects assigned to them according to the staffing plan, thereby contributing to the provision of a high-quality educational process. They are involved, together with their PhD students in academic projects and mobilities.

✓ Aspects that constitute best practice examples

We particularly appreciate the existing strategy for attracting, training, and integrating young PhD graduates and doctoral students into teaching activities, thereby ensuring the sustainability of human resources in the medium and long term.

✓ Recommendations

The domain Mathematics has 3 PhD Supervisors, the minimum number by low to act as a doctoral domain. The recommendation is to enlarge the Mathematics domain with other Ph.D. supervisors, from Lucian Blaga University of Sibiu or / and external; this fact would give benefits by enlarging the opportunities for students to work in different areas of research. One also recommends to intensify collaboration with specialists from other universities and research institutes from Romania and abroad.

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)

ULSB actively promotes the professional and personal development of doctoral supervisors through clearly defined strategic objectives included in its Multi-annual Institutional Development Plan. These objectives emphasize continuous improvement and the internationalization of academic activities. The implementation of these priorities is supported by the active involvement of doctoral supervisors in research and institutional development projects, as well as by the planning and execution of academic mobility programs. These include Erasmus+ study and training mobilities for both teaching and non-teaching staff, regulated by institutional procedures and guidelines. Through these measures, ULBS ensures a structured and sustainable framework for enhancing academic performance, fostering international collaboration, and supporting the ongoing development of its human resources.

✓ 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

ULSB consistently supports the professional development of its staff, contributing to the creation of a competitive, dynamic, and generationally balanced academic environment. Access to relevant informational resources is ensured, representing a key factor in sustaining academic advancement. In recent years, primary documentation resources have included full-text online access to scientific journals through institutional subscriptions to major databases such as ScienceDirect, SpringerLink, and Web of Knowledge, available via the ANELIS platform. PhD students benefit from unrestricted access to these resources, supporting their academic and research activities.

✓ Aspects that constitute best practice examples

PhD supervisors and their students are involved in many academic / research / training projects / programs. The PhD students' short mobilities are covered by ULBS fundings.

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.
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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 recruitment of doctoral supervisors at Lucian Blaga University of Sibiu (ULBS) is conducted in full compliance with the applicable legal and institutional framework, ensuring transparency, fairness, and merit-based selection. The procedures governing this process are clearly defined and regulated by relevant national and institutional documents, including the methodology for granting the habilitation certificate (OM 3998/2024), the ULBS-specific habilitation methodology, the regulations on doctoral studies, and the regulations of the Doctoral School of Engineering Sciences and 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

Recruitment processes are conducted publicly and adhere to principles of legality, equity, and professional competence. Candidate evaluation is carried out in accordance with the standards established by CNATDCU and ULBS, ensuring the selection of highly qualified academic staff. At the moment of evaluation, there are no additional internal requirements for affiliation with the doctoral school, domain Mathematics, beyond those specified in the national habilitation standards for the field of Mathematics (https://doctorate.ulbsibiu.ro/wp-content/uploads/Regulament_SDSIM_2025.pdf).

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)

IOSUD-ULBS and the Doctoral School of Engineering Sciences and Mathematics employ modern information technology solutions to enhance the efficiency of administrative and academic processes, thereby improving the quality of services provided to the university community and its stakeholders. Transparency, accessibility, and effective information management are supported through the use of integrated IT tools, including internet and intranet communication systems that facilitate interaction among students, academic staff, administrative personnel, and external partners. Additionally, specialized applications are used for managing student records, payroll, accounting, and institutional assets. The institution also utilizes online forms to collect feedback from doctoral supervisors and doctoral students, ensuring continuous improvement of academic processes. Furthermore, dedicated

software systems, such as plagiarism detection tools, are implemented to maintain academic integrity. Through these digital solutions, IOSUD-ULBS ensures streamlined operations, enhanced transparency, and improved service quality across all levels of doctoral education.

- ✓ 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

ULSB employs modern IT tools within its administrative and educational processes, in line with its strategic objective of improving access to information and enhancing the quality of services provided to the university community. The university's digital transformation strategy focuses on streamlining workflows, increasing transparency, and reducing processing times for administrative requests.

At the level of the Doctoral School, digital platforms support the automation of key processes, including access to curricula, grade visualization, and communication with administrative services. Students and academic staff regularly use university applications for scheduling, exam registration, and the management of academic activities. The implementation of digital solutions has led to increased administrative efficiency and improved user experience for students, academic, and administrative staff. These tools also facilitate effective communication and continuous information flow, reducing reliance on physical documentation and direct contact.

- ✓ Aspects that constitute best practice examples

The website of IOSUD-ULSB is well organized, providing all necessary information.

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 doctoral studies program in Mathematics, within Doctoral School of Engineering Sciences and Mathematics of ULBS, evaluated for the purpose of maintaining accreditation, is developed in accordance with the standards and performance indicators set out in Government Decision No. 962/2024 approving the Methodology for the external evaluation of the quality of education in higher education, the 2025 Guide for the evaluation of doctoral study fields, and the Regulation on the initiation, approval, monitoring, and periodic evaluation of study programs.

* 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.

The doctoral program in Mathematics complies with the European Credit Transfer System (ECTS), integrating teaching, learning, practical, research, and assessment activities, in accordance with: Order No. 6.768/2023 of December 12, 2023, approving the Methodology for awarding transferable credits in lifelong learning, the ULBS Doctoral Student Guide, the Regulations on the professional activity of ULBS students, based on ECTS. The doctoral program in Mathematics is supported by relevant documents, such as: the Curriculum, Subject files with expected learning outcomes, Description of competences in accordance with the European Qualifications Framework (EQF) and the National Qualifications Framework (NQF), Reports by doctoral students on the periodic evaluation and monitoring of research 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 doctoral program in Mathematics is structured according to a coherent curriculum based on expected learning outcomes and the ECTS system, integrating teaching, practical work, research, and assessment activities in compliance with national and European standards.

The doctoral program has two components:

1. a training program based on advanced university studies, with 30 credits and 900 hours, covering the following subjects: Scientific research methodology: engineering, exact, and life sciences; Academic ethics and integrity; Functional analysis and applications in linear operator theory; Probabilistic methods in approximation theory.
2. an individual scientific research program, with 210 credits and 6300 hours, based on research activities and dissemination of research results, as well as on the development and completion of the doctoral thesis

The doctoral program in Mathematics is structured according to the curriculum, based on expected learning outcomes and the ECTS system, integrating teaching, practical work, research, and assessment activities in accordance with national and European standards. The curriculum includes subjects corresponding to the mission undertaken. The flexibility of the learning process is ensured by optional subject packages, depending on the research topics proposed to be put out to competition for vacant doctoral student positions.

- ✓ Recommendations

It is recommended a more clearer implementation of the competencies in the subject files, in accordance with the national framework regulation.

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.	
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).

- ✓ 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 is designed to ensure the correlation between the expected learning outcomes and the targeted professional competences, in accordance with national occupational standards and the European Classification of Occupations (ESCO). Doctoral studies represent the third cycle of university studies and allow students to obtain a level 8 qualification in the European Qualifications Framework (EQF) and the National Qualifications Framework (NQF).

- ✓ 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 studies in Mathematics aims to develop human resources competent in scientific research, capable of entering the highly skilled labor market. They consist of training, through research, for research and development and innovation and constitute professional research experience, completed, after defending the doctoral thesis, by awarding the title of doctor. Possible occupations according to the ESCO Code 2 classification and more restricted ISCO groups are: 21 - Science and engineering professionals; 22 - Health professionals; 23 - Education specialists; 24 - Administrative and commercial specialists; 25 - Information and communications technology specialists; 26 - Legal, social, and cultural specialists; 2310.1.24 - Higher education teacher in mathematics 2120.5 – Mathematician; 31 - Related science and engineering specialists 35 - Information and communications technicians.

The doctoral program in Mathematics is designed in accordance with national occupational standards and the European Classification of Occupations (ESCO), and the learning outcomes and skills acquired reflect the real requirements of the labor market, being formulated in the curricula and validated through consultations with stakeholders. The correlation between learning outcomes and occupational requirements is strengthened by continuously updating the curriculum content in line with developments in ESCO/COR, intensifying collaboration with the national and international academic community and with EUA-CDE.

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.
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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 implementation of principles of student-centered learning is supported by: The ULBS Charter; The ULBS Student Rights and Obligations Code; The ULBS Doctoral Student Guide; The vision, mission, values, and strategic objectives of ULBS; ULBS Strategic Plan 2024-2029; ULBS Strategy for 2025-2034.

- ✓ 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

Within doctoral studies in Mathematics, the principles of student-centered learning integrates through the individual research program, and are included in the structure of the curriculum.

Student-centered learning is reflected from the moment of admission to doctoral studies, which is carried out on proposed research topics. The course descriptions, and individual research programs within the doctoral program in Mathematics reflect active teaching, learning, and assessment methods tailored to the needs and individual pace of development of doctoral students.

✓ Aspects that constitute best practice examples

During the considered period, four doctoral students in the field of doctoral studies in Mathematics, 4 doctoral students are employed full-time as research assistants in mathematics, in the project financed by the National Recovery and Resilience Plan PNRR-III-C9-2022-I8 "Mathematical Methods and Models for Biomedical Applications" (Ma.Me.Mo.Bi.A), Project code: 125/15.11.2022, Contract no. 760076/23.05.2023, implementation period 19.07.2023-30.06. 2026.

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)

Participation of doctoral students in academic mobility programs are credited in the curriculum and are carried out in accordance with internal regulations, methodologies, and procedures for the organization and implementation of mobility: Methodology for approving mobility grants for ULBS doctoral students from IOSUD-ULBS funds; Internal regulations regarding academic and opportunities for international exchanges; ULBS academic mobility plans and international cooperation agreements.

✓ 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

IOSUD-ULBS, through the Doctoral School of Engineering and Mathematics, supports, including financially, the participation of doctoral students in international academic mobility programs, in accordance with the principles of student-centered learning, namely: international conferences, research internships, summer schools, training courses, etc. Doctoral students are also offered other diverse opportunities to participate in academic mobility, both in person and virtually, through Erasmus+ programs and other international partnerships (FORTHEM, FULBRIGHT, etc.). Access to mobility is supported by informative guides, academic counseling, and administrative support: Internal procedures and methodologies for organizing and conducting academic mobility; Support documents for students and guides on mobility opportunities.

During 2021-2025, doctoral students in the field of doctoral studies Mathematics participated in 7 international academic mobility grants and/or research award including 6 participations of doctoral students at Summer Schools and Seminars (Italy, Germany, Sweden); one doctoral student was awarded Researcher Grand Prix (Dijon Prix), at Bourgogne Europe University (France). IOSUD-ULBS provides financial support to doctoral students, including for the publication of articles in WOS-listed journals listed in WOS, on the one hand, and awards/rewards for achieving these results. During the considered period one doctoral student in the field of doctoral studies Mathematics was awarded by ULBS for publishing a scientific article in the ISI Web of Science - indexed journal LINEAR ALGEBRA AND ITS APPLICATIONS, Volume 709, MAR 15 2025, Page 40-57, ISSN 0024-3795, quartile Q2/AIS, WOS:001414391100001.

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)

IOSUD-ULBS institutional policies on equity and inclusion are implemented through: Strategies/ methodologies/ tools for ensuring equity, incentives, educational support services; Institutional policy on equitable access and diversity in education; Gender equality plan; Regulations on the organization and functioning of the Integrated Student Services Center – SmartHub; ULBS Charter; Code of ethics and academic conduct; Internal regulations on curricular adaptations and teaching strategies for students with special needs or diverse learning styles; Student support programs (tutors, educational advisors, personalized learning sessions).

- ✓ 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

IOSUD-ULBS ensures equal opportunities for all students, including doctoral students, in accordance with their potential and aspirations, taking into account the diversity of learning styles and abilities. Support measures are implementing for developing inclusive educational resources, training doctoral supervisors in differentiated approaches, and constantly monitoring the progress of doctoral students from vulnerable groups or with special needs. The implementation and impact of these measures are documented and reflected in: Reports on student participation in educational programs, including personalized support measures.

- ✓ Aspects that constitute best practice examples

Doctoral students benefit from awards for publishing scientific articles, involvement in projects with significant funding, reduced fees for extension periods, and scholarships for covering tuition fees.

- ✓ Recommendations

It is recommended strengthening of support measures for developing inclusive educational resources by constantly monitoring the needs of doctoral students from vulnerable groups or with special needs.

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)

Providing access to adequate resources and services at IOSUD-ULBS is supported by:
Institutional policy on accessibility and support for students with special educational needs/ disabilities (including Regulations governing the organization and operation of the Integrated Student Services Center – SmartHub; ULBS Charter; Code of Ethics and Academic Conduct);
Strategies/methodologies/tools for ensuring equity and inclusion;
Provisions in the Student Regulations regarding the provision of resources and support services;
Internal procedures for adapting the curriculum and educational activities for students with disabilities;
Reports and documents on physical and digital accessibility measures for the campus and educational resources (including Services, Documents, ULBS Digital Transformation Strategy 2022-2027).

- ✓ 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

IOSUD-ULBS ensures access for all students, including those with special educational needs or disabilities, to resources and support services tailored to individual learning needs, specific to the field, cycle, and form of organization of the study program. Support programs and services are offered to students with disabilities: counseling, adaptations of educational materials, technological assistance, specialized tutors, etc. Statistical data on the number and type of students with special educational needs and the use of support services are collected and analyzed, for future implementation in internal regulations.

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.

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

Within the doctoral program in Mathematics, learning outcomes are explicitly described in the following documents: Subject files; Curricula; The IOSUD-ULBS doctoral student guide. The process of defining and updating learning outcomes is regulated through internal documents and mechanisms that ensure permanent alignment with developments in the academic and professional fields: Internal regulations on the definition and assessment of learning outcomes; Internal procedures for reviewing and updating learning outcomes, in line with educational developments and labor market requirements.

- ✓ 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

Within the doctoral program in Mathematics, learning outcomes are coherently formulated, structured according to specific (professional) and transversal competences and expected learning outcomes which are consistent with level 8 of the CNC (National Qualifications Framework), at the levels Knowledge, Skills, Responsibility and autonomy, as follows:

Knowledge - advanced knowledge in the field of scientific specialization; in-depth understanding of research methodology and specialized literature; knowledge of data analysis and interpretation; knowledge of research ethics and academic integrity;

Skills - the most advanced and specialized skills and techniques, including: the ability to design, plan, and carry out original scientific research; analytical and critical skills for evaluating complex information; scientific communication skills, both oral and written; ability to publish and present results at conferences or in specialized journals; ability to work independently and in a multidisciplinary team; experience in designing, implementing, and managing a scientific research project; flexibility and openness to continuous learning and adaptation to new technologies and research methods;

Responsibility and autonomy - demonstrating a high level of authority, innovation, autonomy, scientific and professional integrity, and a sustained commitment to developing new ideas or processes at the forefront of a work or study situation, including research, through: developing and advancing knowledge in the field of specialization; publishing research and contributing to the advancement of the field; mentoring students or other young researchers; adhering to ethical and integrity standards in research; planning, organizing, and coordinating one's own activities and resources to achieve objectives; applying research results to solve practical or theoretical problems.

The assessment of learning outcomes is carried out using various methods relevant to the specific nature of the disciplines and the level of study, ensuring correlation with the targeted competences.

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 \(documents preferably included through links in the body of the IER\)](#)

Within the doctoral program in Mathematics, checking of learning outcomes is carried out, both during the semesters and at the end of the studies, in accordance with: The regulations on the organization and conduct of doctoral studies at IOSUD-ULBS; The operational procedure for the completion of doctoral studies at IOSUD-ULBS; Doctoral study contracts; Curricula indicating the forms of assessment of learning outcomes during and upon completion of studies. Doctoral studies are completed by defending the doctoral thesis in a public session before the doctoral thesis defense committee, according to the procedure approved by the ULBS Senate.

- ✓ [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 training program, based on doctoral university studies, is organized during the first semester of the first year. For each attended subject, as part of the doctoral university studies training program, the doctoral student receives a certificate of attendance, issued by the course teacher and countersigned by the doctoral supervisor. Participation in the exam for a subject is mandatory and is graded ("Very good," "Good," "Satisfactory," or "Unsatisfactory"). Passing the exam is quantified by a number of transferable credits, according to the individual doctoral study program, annexed to the contract. A grade of "Unsatisfactory" means failure and entails the obligation to retake the exam in order to obtain the corresponding credits. If the grade is "Unsatisfactory" on the second examination as well, the doctoral student is expelled from doctoral studies. The doctoral student must accumulate a total of 30 ECTS credits within the program based on advanced university studies. After passing the training program based on advanced university studies, the doctoral student submits the scientific research project for the doctoral thesis. Acceptance or promotion of the scientific research project means approval of the doctoral thesis topic and continuation of the individual scientific research/applied research program.

The individual scientific research program is carried out in accordance with the individual doctoral study program, annexed to the study contract. The ultimate goal of the individual scientific/applied research

program is to develop and defend the doctoral thesis and complete all activities established by the doctoral supervisor as part of their individual doctoral study program, including the development and defense of a research project and a minimum of 3 scientific research reports. After each presentation of a scientific research report, minutes are drawn up recording both the grade awarded and the main remarks and recommendations made by the doctoral supervisor and the members of the academic guidance and integrity committee. Doctoral studies are completed, after completing all requirements established by the study program, by defending the doctoral thesis, following the regulations in force. The doctoral student is responsible for the originality of the doctoral thesis.

✓ **Recommendations**

It is recommended to co-opt foreign members into the academic guidance and integrity committees of the PhD students, in order to more effectively integrate the scientific research of doctoral students into the international circuit and to open up new opportunities for their academic mobility.

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.
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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)

Internal validation of the regulations and admission calendar at IOSUD-ULBS is carried out annually, in accordance with legal requirements and includes: Regulations for admission to doctoral studies; Admission regulations, which include the conditions, criteria, and deadlines for admission to ULBS; Framework methodology for organizing the admission process, established by the Ministry of Education and Research and adapted by ULBS; The process of internal validation of the regulations and admission calendar for compliance with the framework methodology; Public announcements regarding admission, posted on the ULBS website and in other informational materials; Distribution of places for doctoral studies, list of eligible doctoral supervisors, proposed research topics.

- ✓ 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

IOSUD-ULBS, through CSUD and doctoral schools, develops and applies procedures for admission to doctoral programs, including for the field of doctoral studies in Mathematics, ensuring compliance with the principles of fairness, transparency, and equal access to higher education. The information regarding the admission process is communicated publicly, in a transparent manner, by posting it on the website <https://doctorate.ulbsibiu.ro/ro/admitere/> and through other information channels, ensuring the access for candidates to all relevant details.

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)

Admission to the doctoral program in Mathematics is conducted in accordance with the principles of fairness, equal opportunity, and social inclusion, in accordance with national regulations and the institutional policy of IOSUD-ULBS, referred to: Methodology for preventing, combating, and sanctioning any form of discrimination and/or violation of human dignity at ULBS; Methodology for the organization and functioning of the Career Counseling and Guidance Department.

- ✓ 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 School of Engineering Sciences and Mathematics ensures an accessible and equitable admission framework, adapted to the needs of candidates from vulnerable groups, who are at social or educational risk, as well as those with special educational needs and/or disabilities through: The admission regulations, which specify the principles of fairness, equal opportunities, and measures to support for access for vulnerable groups; Institutional policy on social inclusion and equal opportunities in the admission process; Procedures and guidelines for accommodating candidates with special educational needs and/or disabilities.

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 educational process is carried out in accordance with the legal regulations in force regarding doctoral studies and with the specific regulations/ procedures approved at the IOSUD-ULBS level, which establish the criteria for academic evaluation, promotion, re-examination, and completion of studies such as: Regulations on the organization and conduct of doctoral studies at IOSUD-ULBS; Operational procedure regarding the completion of doctoral studies at IOSUD-ULBS; Doctoral study contracts; Curricula indicating the forms of assessment of learning outcomes during and at the end of studies; Code of ethics and academic conduct, including sanctions for breaches of academic standards; Policies on student attendance, participation, and involvement in teaching, research and extracurricular 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 Doctoral School of Engineering Sciences and Mathematics provides support for the academic progress of doctoral students by implementing institutional regulations regarding their activities. The academic progress of doctoral students is monitored and documented by the Doctoral, Postdoctoral, and Habilitation Studies Service within IOSUD-ULBS, reflecting their academic status, promotion, and individual performance throughout their doctoral studies. Monitoring involves both the recording of academic and scientific results and the assessment of compliance with ethical and academic conduct standards.

- ✓ Aspects that constitute best practice examples

Doctoral students benefit from reduced fees for extension periods, and scholarships for covering tuition fees.

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.
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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)

International activity at the IOSUD-ULBS level is strengthened through participation in educational, research, and social projects and partnerships, as well as through the conclusion of memoranda of understanding and collaboration agreements with universities and higher education institutions abroad, through: International projects and partnerships in the field of education, research, and social activities within Structural Programs Department, Research, Development, and Innovation Service, HPI-ULBS Knowledge Transfer Institute, International Relations Department; Memoranda of understanding or cooperation agreements with universities and higher education institutions in other countries; Procedures and guidelines for student and academic staff mobility, including exchange and mobility agreements. IOSUD-ULBS supports the improvement of the quality of education and research through internationalization actions, in accordance with the ULBS International Cooperation Strategy. Joint doctoral programs are organized in accordance with the ULBS Methodology for conducting joint doctoral 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 Doctoral School of Engineering Sciences and Mathematics implements politics referred to the development of the international dimension of doctoral studies by supporting and promoting the mobility of doctoral students, doctoral supervisors, academic and administrative staff. International cooperation and academic mobility are also achieved through international joint doctoral programs or by co-opting foreign teaching staff into academic guidance and integrity committees/ doctoral thesis support committees.

The membership of IOSUD-ULBS into the European FORTHEM Alliance in 2021 has led to increasing the internationalisation process. Several doctoral students and doctoral supervisors have participated in a series of academic and research mobility programmes in recent years. Among the actions taken towards the internationalisation of doctoral studies, are: FORTHEM MasterClass for MSCA Postdoctoral Fellowships, 2023; Doctoral studies at partner universities information sessions (3 information sessions during 2024, involving University of Burgundy Europe (France), University of Jyväskylä (Finland), University of Agder (Norway), University of Latvia, University of Valencia (Spain), Johannes Gutenberg University Mainz (Germany), University of Palermo (Italy), Lucian Blaga University of Sibiu (Romania), University of Opole (Poland)); DevOps Summer School 2024 (BIP), ULBS; other different events dealing with research management, research communication, CV & Proposal Writing Training for Career Development etc., FORTHEM Researcher Grand Prix 2025, FORTHEM Mentoring Programs and other events. Also, IOSUD-ULBS has the Erasmus+ agreements with universities abroad, both in Europe and in partner countries.

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)

The research projects carried out at IOSUD-ULBS are exploited and visible, in accordance with the strategic directions of ULBS, through the content of the following documents: Procedures and guidelines for integrating research results into the teaching process; The ULBS research strategy, which includes priorities in the field of 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

Within the doctoral program in Mathematics, scientific research activities are integrated into the doctoral curriculum, contributing to the acquisition of professional and transversal skills and to the achievement of the learning outcomes set out in the curriculum. The integration of scientific research activities into the doctoral curriculum is reflected and documented in: the course descriptions; Curricula and individual research programs; Research reports prepared by doctoral students; Scientific papers/articles published by doctoral students; Doctoral theses written by doctoral students.

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)

The research results are visible at the national and international level, being reflected in: Annual reports and strategic research plans of ULBS faculties, including the Doctoral School of Engineering Sciences and Mathematics; Scientific publications and articles in internationally indexed journals, produced by doctoral supervisors and doctoral students; International partnerships and collaborations in scientific research; Research projects funded by national and international agencies; Participation in international conferences and symposiums, including the organization of scientific events; Online scientific research databases and platforms (e.g., Google Scholar, Scopus, Web of Science) that reflect the work of ULBS researchers.

- ✓ 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 activity carried out by doctoral students and doctoral supervisors is aligned with the objectives of the doctoral study program in Mathematics. Among the most relevant scientific results, visible at international level and adequately exploited, are:

a) Scientific publications and articles in internationally indexed journals, by doctoral supervisors and doctoral students, including articles published in: ISI Web of Science-indexed journal *Linear Algebra and its Applications*, Volume 709, MAR 15 2025; J. Mathematical Foundations of Computing, 7(4), (2024), Journal of the Royal Academy of Exact, Physical and Natural Sciences. Series A. Mathematics 116(1), Article number: 19 (2022); J. Dolomites Research Notes on Approximation, 17(2), (2024); Journal of Mathematical Inequalities, Volume 19, Number 1 (2025), J. Applicable Analysis and Discrete Mathematics, 16(2), (2022); as well as in: Gervasi, O., et al. Computational Science and Its Applications – ICCSA 2025 Workshops. ICCSA 2025. Lecture Notes in Computer Science, vol 15892. Springer.

b) Research project: during the period under evaluation, four doctoral students in the field of doctoral studies in Mathematics are employed full-time as research assistants in mathematics in the project financed by the National Recovery and Resilience Plan PNRR-III-C9-2022-I8 "Mathematical Methods and Models for Biomedical Applications" (Ma.Me.Mo.Bi.A), Project code: 125/15.11.2022, Contract no. 760076/23.05.2023, implementation period 19.07.2023-30.06. 2026.

✓ Aspects that constitute best practice examples

Doctoral students benefit from financial support for publishing scientific articles in WOS-listed journals on the one hand, and awards/rewards for achieving these results. Also, doctoral students are employed full-time as research assistants in mathematics in scientific projects.

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)

At the level of IOSUD and the doctoral schools, actions aimed at improving the quality of the educational process are included in the annual operational plans, aligned with the documents established at the university level. The structures responsible for quality assurance (CEAC and SCEAC) prepare quality reports at the ULBS and IOSUD levels regarding academic performance and the results of evaluation processes, with the purpose of improving the quality of the educational process.

✓ 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

Quality assurance at the IOSUD and doctoral school levels focuses on the following aspects: study programs, the teaching process, teaching staff activities, the review of curricula and course syllabi, the improvement of educational resources and access to digital technology, increasing the degree of student involvement in the evaluation of teaching activities, and the efficiency of scientific research. The effectiveness of these activities is reflected in the CEAC and SCEAC reports.

✓ Aspects that constitute best practice examples

IOSUD develops an action plan for improving the quality of education, and its implementation is subsequently monitored.

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)

IOSUD and the doctoral school periodically organize consultations with members of the academic community, graduates, and employers regarding the modifications required within regulations, methodologies, and procedures. In addition, stakeholders' opinions are collected through questionnaires concerning teaching activities, evaluations carried out by students and graduates, consultations held during coordination meetings, and collaboration with representatives of the economic and institutional environment, with the conclusions being recorded in meeting minutes. The results of these consultations are reflected in decisions regarding the adaptation of the study domain content to labor market requirements and to the expectations of the direct and indirect beneficiaries of the educational process.

✓ 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 institution has a well-structured system of quality-centered policies and procedures, clearly regulating the development, approval, dissemination, and archiving of relevant documents, as well as the consultation of stakeholders for the purpose of improving the educational process. Following these consultations, the opinions of community members are incorporated into the strategic documents and revised regulations at the IOSUD and doctoral school levels. SCEAC annually prepares reports for quality evaluation and assurance.

✓ Recommendations

It is necessary to include consent regarding the processing of personal data (GDPR) in the student satisfaction questionnaire content.

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 annual reports of the Ethics Committee are published on the University's website. Within the University Ethics Committee, a subcommittee dedicated to research ethics is also active. This subcommittee oversees the implementation of research ethics policies, in accordance with the regulations governing scientific research ethics, which cover the following aspects: publication and authorship, respect for the dignity of research participants, compliance with ethical standards for research conducted on human subjects and experiments involving animals, as well as other bioethics regulations, research data management, collaboration, conflicts of interest, fraud, the provision of effective research environments, and the prevention of harm in research and innovation.

- ✓ 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 of the Ethics Committee and the Bioethics Subcommittee are approved by the University Senate. The independence of the Ethics Committee is guaranteed through the university regulations. The procedure for appointing the members of the committee complies with the legal and institutional requirements regarding representativeness. The Committee prepares an annual activity report. A particularly important role in doctoral university studies is played by the Research Ethics Subcommittee, which oversees the implementation of research ethics policies.

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)

IOSUD and the doctoral school consistently apply the specific procedures, thus ensuring an efficient system for managing academic and administrative activities that regulate the initiation, monitoring, and revision of study programs, study domains, and related activities. These procedures are systematically implemented and periodically reviewed. Curricula are periodically analyzed. The activities are recorded in the SCEAC reports and integrated into the CEAC reports.

- ✓ 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 are applied by IOSUD and the doctoral school both for new study programs and for existing ones. The monitoring of study programs is carried out continuously, systematically, and in a planned manner, involving the supervision of how activities are conducted in order to promptly identify shortcomings and initiate preventive and corrective actions.

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)

ULBS and IOSUD have concrete structures, strategies, and procedures for the management and quality assurance of teaching, learning, and research activities, as well as for the development of their own quality culture. The structures, policies, and strategies adopted at the institutional level create the institutional framework for the effective development and monitoring of quality and for the continuous improvement of quality standards. In addition to teaching staff, the Quality Evaluation and Assurance Commission also includes representatives of students, employers, the administrative structure, and the trade union. The members of the commission at the university level, the members of the commission at the IOSUD level, as well as program coordinators and other stakeholders, are involved in the process of monitoring and implementing procedures regarding the initiation, monitoring, and periodic review of programs.

- ✓ 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

ULBS and IOSUD actively involve teaching staff, students, employers, and graduates. Their contributions are integrated into regulations, meeting minutes, partnerships, and reports of the specialized commissions and CEAC. Meetings with various stakeholders revealed that the faculty frequently organizes consultations; therefore, the interested parties are actively involved.

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

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

The semester-based evaluation of teaching staff by students is carried out in accordance with the Methodology regarding the evaluation of teaching staff performance by students. Evaluations are conducted each semester using the Semester Evaluation Questionnaires completed by students. The evaluation results are analyzed by CEAC. The reports prepared are examined within CSUD, and following this analysis, an Improvement Plan for Teaching Activities is developed. The evaluation results are communicated to the teaching staff and other interested parties. The proposed measures must be implemented in accordance with the deadlines established in the action plan.

- ✓ 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 school applies, on a semester basis, the process of evaluating teaching staff by doctoral students. The SCEAC representatives continuously undertake measures aimed at increasing the response rate to the evaluation questionnaire. The evaluation form is concise, contains mainly open-ended questions, and is distributed appropriately, avoiding overlap with examination periods.

- ✓ Recommendations

It is necessary to include the results of the evaluation of teaching staff by students in the SCEAC report for the 2024–2025 academic year.

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)

The institution collects and analyzes data regarding: the results of teaching staff evaluations conducted by students; the pass rate, academic performance, and progress of doctoral students; graduate employability and employer feedback; the academic mobility of students and teaching staff; participation in research activities, publications, and projects; educational resources, material infrastructure, and the degree of use of the infrastructure. The collected data are used by SCEAC and CEAC for the preparation of reports and proposals for improvement.

- ✓ 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 “Lucian Blaga” University of Sibiu has an integrated digital infrastructure and centralized IT services that facilitate students’ and other stakeholders’ access to relevant information and documents, including through online platforms and dedicated applications. Data regarding academic performance, professional integration, and beneficiary satisfaction are systematically collected and analyzed through regulated institutional procedures. The University and IOSUD have implemented mechanisms for collecting relevant information that support the continuous improvement of activities in all areas.

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 official ULBS website and the IOSUD webpage provide information of public interest. Relevant documents are available there, including regulations, reports, information regarding teaching staff, research activities, and other aspects related to the organization and functioning of the study 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

ULBS and the doctoral school ensure access to information of public interest on the official website by publishing essential documents regarding the study domain: curricula, course syllabi, activity reports,

information on tuition fees and scholarships, regulations, accommodation, etc. The CSUD decisions and the SCEAC reports are also publicly available.

- ✓ Aspects that constitute best practice examples

The Doctoral Student Guide is comprehensive and includes a wide range of useful information for doctoral students.

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)

The following relevant documents are available on the IOSUD-ULBS website: CSUD decisions, activity reports, information regarding tuition fees and scholarships, CVs of teaching staff, regulations, and other relevant administrative documents. In addition, decisions taken at all levels are announced/disseminated through communication channels (e-mail and announcements published on the website), both to teaching staff and to students.

- ✓ 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 communication of decisions is carried out both at the institutional level and at the level of IOSUD and the doctoral school, through the university and IOSUD websites, the E-learning platform, and internal communication channels. CSUD Decisions are publicly available.

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.

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

IOSUD and the doctoral school ensure the implementation of the procedures required for the external quality evaluation process, in accordance with the legislation. These procedures are carried out based on the regulations established by ARACIS procedures and regulations or by other external quality assurance agencies in education.

- ✓ 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 DSUD staff is involved in the external quality evaluation procedure alongside the management of the doctoral school and IOSUD. The latest evaluation of the DSUD in Mathematics took place in 2021, and no recommendations were issued.

The indicator is: fulfilled.

IV. SWOT Analysis

Strengths: ✓ Active involvement of stakeholders (students, graduates, employers, academic staff, and external partners) in decision-making and quality assurance processes. ✓ Transparent governance and communication through the ULBS and IOSUD websites, E-learning platform, and internal communication channels. ✓ The Doctoral Student Guide is comprehensive and provides extensive useful information for doctoral students. ✓ Doctoral students benefit from awards for scientific publications, involvement in funded projects, reduced extension fees, and scholarships covering tuition fees.	INTERNAL FACTORS 🕒	Weaknesses: ✓ Student satisfaction questionnaires do not yet explicitly include consent regarding the processing of personal data (GDPR). ✓ The results of teaching staff evaluations by students were not yet included in the SCEAC report for the 2024–2025 academic year. ✓ The number of doctoral supervisors and of doctoral students is at a minimum level.
SWOT analysis		
Opportunities: ✓ Expansion of international academic partnerships and mobility programs for doctoral students and academic staff. ✓ Increased use of digital tools and online platforms to improve student engagement, feedback collection, and quality monitoring processes. ✓ Access to European and national research funding programs that can support doctoral research and institutional development.	EXTERNAL FACTORS 🕒	Threats: ✓ Possible decreases in national funding for higher education and doctoral research. ✓ Increasing competition from other national and international doctoral schools. ✓ Potential brain drain and migration of highly qualified graduates and researchers toward institutions abroad.

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	
2.	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.	F	
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 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.	F	One recommends to ensure complete equipment for hybrid education; increased accessibility for people with disabilities.
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	The domain Mathematics has 3 PhD Supervisors, the minimum number by law to act as a doctoral domain. The recommendation is to enlarge the Mathematics domain with other Ph.D. supervisors, from Lucian Blaga University of Sibiu or / and external; this fact would give benefits by enlarging the opportunities for students to work in different areas of research. One also recommends to intensify collaboration with specialists from other universities and research institutes from Romania and abroad.

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
6.	I.P.A.3.1.2 The HEI ensures professional and personal development for its staff.	F	
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	It is recommended a more clearer implementation of the competencies in the subject files, in accordance with the national framework regulation.
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	
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	
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	
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	It is recommended strengthening of support measures for developing inclusive educational resources by constantly monitoring the needs of doctoral students from vulnerable groups or with special needs.

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
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	It is recommended to co-opt foreign members into the academic guidance and integrity committees of the PhD students, in order to more effectively integrate the scientific research of doctoral students into the international circuit and to open up new opportunities for their academic mobility.
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	F	

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
	collaboration in academic and research activities.		
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	
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	
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	It is necessary to include consent regarding the processing of personal data (GDPR) in the student satisfaction questionnaire content.
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	
28.	I.P.C.4.1.1 The organisational component analyses the results of the students' biannual evaluation of teachers.	F	It is necessary to include the results of the evaluation of teaching staff by students in the SCEAC report for the 2024–2025 academic year.
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	F	

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
	access to information of public interest regarding the evaluated study programme.		
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

VI. Conclusions

Following the completion of the periodic evaluation procedure, the on-site visit, and the drafting of the EER, it was found that all performance indicators are met.

Therefore, the committee proposes **maintaining accreditation (MAC)** for the **doctoral domain in Mathematics, Doctoral School of Engineering Sciences and Mathematics, Lucian Blaga University of Sibiu.**

VII. Annexes

Enclosed:

1. The schedule of the on-site visit.
2. The minutes of the meetings held during the on-site visit.