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Annex No. 3

The External Evaluation Report of a Doctoral Study Domain

Contents

I. Introduction[1]

This report was drawn up pursuant to the external evaluation of the Transilvania University of Brasov, Interdisciplinary Doctoral School, Informatics field. The evaluation was performed by the Romanian Agency for Quality Assurance in Higher Education (ARACIS), during 4-6 September 2023. The abbreviations UTBV and SFI are used throughout the report for the Transilvania University of Brasov and the Interdisciplinary Doctoral School. The external evaluation of the doctoral field in Informatics took place in accordance with the methodology, standards and quality indicators of ARACIS, mainly aiming at the accreditation or maintaining the accreditation of the educational process, scientific research, academic, administrative, economic and management structures, as well as outlining the academic, scientific, professional, managerial and image-related achievements of the Informatics doctoral field within SDI of UTBV on a national and international level.

The following documents were the basis of the report's methodology: National Education Law no. 1/2011 with subsequent amendments and additions, Romanian Government Decision no. 681/2011 regarding the approval of the doctoral studies Code, Emergency Ordinance of the Government of Romania no. 75/2005 on ensuring the quality of education, approved with amendments and additions by Law no. 87/2006, respectively the Order of the Minister of Education no. 3651/2021 regarding the approval of the Evaluation Methodology of doctoral studies and the systems of criteria, standards and performance indicators used in the evaluation.

The external evaluation of the doctoral field in Informatics also aimed at checking how the prestige, trust and recognition of the evaluated domain can be appreciated and reconfirmed, underpinning the respect, appreciation and public reliability for the **methodology, rules and standards for the achievement of university qualifications**, i.e. the award of PhD degrees by UTBV, SDI.

The Transilvania University of Brasov organizes PhD and postdoctoral studies within IOSUD-UTBV (https://www.UniTBv.ro/cercetare/doctorat-postdoctorat-si abilitare/ iosud.html). IOSUD-UTBV is managed by the Council for Doctoral Studies.

(https://www.UniTBv.ro/cercetare/doctorat-postdoctorat-siabilitare/ despre- scoaladoctorala/csud). CSUD-UTBV is managed by a director. PhD studies are organized and take place within IOSUD-UTBV, through the Interdisciplinary Doctoral School (SDI) (https://www.UniTBv.ro/cercetare/doctoratpostdoctorat-si-abilitare/ despre-scoala-doctorala/echipa-sdi). The Interdisciplinary Doctoral School (SDI) is managed by a director of the doctoral school and by the Council of the Interdisciplinary Doctoral School (CSDI). SDI is integrated within the Vice-Rectorate for scientific research and informatization.

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[1] Each time when applicable the information shall be presented gender-wise.

The Interdisciplinary Doctoral School (SDI) operates within IOSUD UTBV starting 1 October 2010, being established by Decision of the Senate of the Transilvania University of Brasov of 27 July 2010. Previously, based on Government Decision 567/15 June 2005, the Office of the Senate of the Transilvania University of Brasov decided to establish the PhD studies Department on 9 September 2005 (HBS no. 43/09.09.2005). The core mission of this department was to coordinate all PhD studies activities in the university.

As of 1 October 2020 and currently, 18 doctoral fields are functional within IOSUD-UTBV, of which 17 were authorized for provisional operation (Order of the Minister of National Education 5382/29.09.2016/Annex 1 – 5 position 16: https://www.edu.ro/sites/default/files/fisiere&20articole/ORDIN_5382_2016.pdf) based on the 2016 self-evaluation process, and the 18th (Finance) was established afterwards (Ministry Order 3100/28.01.2019/Art. 2: https://www.edu.ro/sites/default/files/fisiere%20articole/ORDIN%203100-2019%20.pdf).

The doctoral field in Informatics is included in the Interdisciplinary Doctoral School (SDI). For the doctoral field in Informatics, the institution was awarded the right to organize PhD studies by Ministry Order 4890/1999 reconf. 4843/1.08.2006; M.O. 1805/2007.

4 doctoral supervisors work within the Informatics field: Prof. Eleonor Ciurea, PhD, doctoral supervisor as of 2001 – retired; Prof. Sabin Tabirca, PhD, doctoral supervisor as of 2017 – UTBV professor, Prof. Adrian Deaconu, PhD, doctoral supervisor as of 2023 – UTBV professor and Nistor Grozavu, doctoral supervisor as of 2023 – external collaborator. Of the 4 doctoral supervisors, 3 fulfil the national minimum standards based on the Order of the Ministry of Education and Scientific Research no. 6129/2016, i.e. a percent of 100% (Annex 3.1.1).

The members of the ARACIS evaluation committee for the doctoral field in Informatics are as follows:

Coordinator:
Professor Andrei PĂUN, PhD, University of Bucharest

International Expert:
Professor Jude HEMANTH, PhD, Karunya Institute of Technology Sciences, Combinatore, India

PhD Student:
Alexandru CHIRU; Polytechnic University of Timisoara

II. Methods used
This chapter will contain the methods and tools used in the external evaluation process, before and during the evaluation visit, including at least:

• The analysis of the internal evaluation report of the doctoral study domain under review and its Annexes;

• The analysis of documents made available by the IOSUD, in physical format, during the evaluation visit (if such documents have been requested);

• The analysis of documents, data and information available on the IOSUD/Doctoral School(s) website, in electronic format;

• Visiting the buildings included in the institution's property, comprising (indicative and non-exhaustive list, which shall be changed according to the context):

- classrooms;
- laboratories;
- the institution's library;
- research centers;
- the Career Counselling and Guidance Center;

- lecture halls for students;
- the student residences;
- the student cafeteria;
- sports ground etc.;
• Meeting/discussions with doctoral students in the doctoral study domain under review;
• Meeting/Discussions with the graduates of the doctoral study domain under review;
• Meeting/Discussions with employers of the graduates in the doctoral study domain under review;
• Meeting/Discussions with the school officials of the Doctoral School(s) in which the doctoral study domain under review is operating;
• Meeting/Discussions with the doctoral advisors in the doctoral study domain under review;
• Meeting/discussions with the representatives of the various structures of the IOSUD/Doctoral School(s) in which the doctoral study domain under review is operating:

- The Council of the Doctoral School, the University Senate, the Board of Directors, the Quality Assessment and Assurance Commission, the Quality Assurance Department, the Ethics Commission (including with the student representatives of these structures);
- the Career Counselling and Guidance Center;
- student organizations;
- secretariats;
- various departments/administrative offices (Social/Student residences-Cafeterias etc.);
- Application of questionnaires to doctoral students or academic staff in the doctoral study domain under review.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

The general description of the domain and its peculiarities are highlighted in the detail of the indicators of Section A. The following were used to this purpose: the analysis of the internal evaluation report of the doctoral study field in Informatics, the data and information available on the UTB-SDI website, the additional annexes provided at the visit to supplement the file submitted to ARACIS, as well as the results of the visit to UTBV, SDI, the Informatics domain, from 4-6.09.2023.

Criterion A.1. The administrative, managerial institutional structures and the financial resources

Standard A.1.1. The institution organizing doctoral studies (IOSUD) has implemented the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies.
The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held during the visit from 4-6 September 2023.

Performance Indicator A.1.1.1. The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:
a) the internal regulations of the Doctoral School;
b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;
c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);
d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;

e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;

f) the contract for doctoral studies;

g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

IOSUD-UniTBv through the Interdisciplinary Doctoral School (SDI) is organized and takes place in accordance with the Regulation on the organization and performance of doctoral and postdoctoral studies (Annex A.1.1.1-1), the version in force at the time of the evaluation being approved by the Senate Decision no. 37 of 28.07.2022.

Therefore, the regulations and methodologies were found and applied as follows:

- The Regulation of the Interdisciplinary Doctoral School (Annex A.1.1.1-2), the version in force at the time of evaluation, approved by the Senate Decision no. 14 of 19.07.2017
- The Director of the Council of the Interdisciplinary Doctoral School (C-SDI) is appointed in compliance with the provisions of art. 14 paragraph (9) of the Code of Doctoral Studies, approved by GD 681/2011, and he was appointed CSUD-UniTBv by Decision no. 99 of 23.07.2021
- Members of C-SDI, doctoral leaders and doctoral students respectively, are elected on the basis of the methodology regarding the election of the members of the Council of the Interdisciplinary Scientific School (Annex A.1.1.1-3), which was developed by CSUD, according to the legal provisions in force. For the 2021-2026 mandate, the methodology was adopted by the CSUD Decision no. 94 of 14.05. 2021 and was approved by the University Senate by Decision no. 19 of 26.05.2021
- The methodology of admission to PhD studies is elaborated on an annual basis for each admission session. For the academic year 2022-2023, the admission methodology (Annex A.1.1.1-5) was proposed by C-SDI, approved by the CSUD by Decision no. 114 of 29.03.2022 and approved by the Senate by Decision no. 34 of 20.04.2022
- The completion of doctoral studies is regulated by the SDI Regulation, the specific procedure being detailed in the IS-8 Instruction on the completion and public defence of doctoral theses (Annex A.1.1.1-6), annex to the SDI Regulation, approved by the CSUD by Decision no. 117 of 9.06.2022
- IOSUD-UniTBv has mechanisms for the recognition of the status of doctoral supervisor and for the recognition of PhD degrees obtained in other states (Annex A1.1.1-7) (Annex A.1.1.1-8) developed on the basis of the MENCS Order no. 5921/2016, being adopted by the CSUD Decision no. 14 of 23.01.2017 (subsequent revision by the CSUD decisions no. 114 of 29.03.2022 and 117 of 9.06.2022) and approved by the University Senate Decision no. 10 of 15.02.2017 (subsequent revision by the Senate decisions no. 34 of 20.04.2022 and 36 of 22.06.2022). This methodology was applied in the Informatics field by a teacher habilitated in France.
- The management structures of IOSUD-UniTBv and the Interdisciplinary Doctoral School operate on the basis of the Regulation of organization and performance of doctoral and postdoctoral studies, being established according to the legal provisions in force. The current mandate of the CSUD corresponds to the period 2020-2024 (4 years), while the mandate of the C-SDI in office is for the period 2021-2026 (5 years)
- The Council of the Interdisciplinary Doctoral School (C-SDI) has the following composition: the director of the SDI (legal member of the C-SDI), who for the current mandate was appointed by the CSUD by the Decision no. 99 of 23.07.2021; 8 PhD supervisors, full members of the SDI, elected by universal, direct, secret and equal suffrage of PhD supervisors, full members of the SDI; 4 doctoral students elected by universal, direct, secret and equal suffrage of doctoral students from the SDI; 4 relevant stakeholders in the scientific field and from the industrial and socio-economic sectors, who were appointed by the CSUD by Decision no. 103 of 23.09.2021. Its activity is visible through the presence lists provided to the commission in Annex A.1.1.1-9.
- The doctoral study contract (Annex A.1.1.1-10) contains the rights and obligations of doctoral students, doctoral leaders, as well as IOSUD-UniTBv through SDI
- The way in which the analysis and approval of proposals on the topic of the Advanced University Studies (PBUA) training program is carried out is regulated by the IS-7 Instruction of the Regulation of the Interdisciplinary Doctoral School (Annex A.1.1.1-12). The content of the PPUA shall be amended on the basis of the following: consultation of doctoral supervisors (form is-7-F1, included in Annex A.1.1.1-12);

consultation of doctoral students (form is-7-F2, included in Annex A.1.1.1-12)
These regulations and methodologies are also present on the university's website.

Recommendations: It is recommended to pursue the good practices, implementation of legislation, regulations and procedures related to the organization of doctoral studies in the field of Informatics.
The indicator is fulfilled.

Performance Indicator A.1.1.2. *The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.*
- *description of the facts, the findings from the assessed institution's documents and the evaluation visititself*
- *analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

In IOSUD-UTBV, the requirements indicated in art. 17 paragraph (5) of the Code of Doctoral Studies are regulated by a package of specific instructions, developed by C-SDI and approved by CSUD, which are included in the Annex to the Regulation of the Interdisciplinary Doctoral School (Annex A.1.1.1-2), approved by the Decision of the University Senate no. 14 of 19.07.2017. The package of instructions was initially approved by the CSUD with the SDI Regulation (CSUD Decision No 18 of 31.05.2017), part of the instructions being subsequently revised (the CSUD decisions approving the current versions of the revised instructions).

Recommendations: It is recommended to pursue the good practices and always include binding criteria, procedures and standards in the SDI Regulation and keep them public.
The indicator is fulfilled.

Standard A.1.2. The IOSUD has the logistical resources necessary to carry out the doctoral studies' mission.

The analysis of the standard was based on the analysis of the self-evaluation file submitted to ARACIS, the additional annexes provided at the visit, the on-site visits, as well as the discussions held online during the visit from 04-06 September 2023.

Performance Indicator A.1.2.1. *The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.*
- *description of the facts, the findings from the assessed institution's documents and the evaluation visititself*
- *analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

Within the Doctoral School, since 2005, the electronic record of doctoral students and their academic path is made through databases for each year of registration, drawn up in Excel. Each Excel database (file), corresponding to one year of registration, includes in separate sheets, generically named, candidates enrolled for admission, admitted candidates, registered doctoral students, grades obtained within PPUA, PhD students in internship, thesis defences, expelled doctoral students.
In order to upgrade and streamline the record system of doctoral students and their path, while ensuring the possibility of direct access to personal information for doctoral students and doctoral supervisors, without jeopardizing the security of the stored data and violating the regulations on the protection of personal data and ensuring confidentiality, a dedicated IT system such as an online electronic platform is currently in implementation (http://doctorat.unitbv.ro/). The platform was initially configured based on a service contract (Annex A. 1.2.1-1) and was later developed through cooperation with the Faculty of Mathematics-Informatics. General aspects about the platform configuration can be found in Annex A.1.2.1-2.

Recommendations:
The indicator is fulfilled.

Performance Indicator A.1.2.2. *The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.*
- *description of the facts, the findings from the assessed institution's documents and the evaluation visit itself*
- *analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

Within the IOSUD UTBV, respectively in the Interdisciplinary Doctoral School (SDI), there are, starting with July 2016, two specialized software tools for verifying the originality of all doctoral theses that are going to be defended, recognized by the CNATDCU (according to OMEC 3485/2016 and subsequently OMEC 5229/2020/ Annex II), namely: - Sistemantiplagiat.ro (https://sistemantiplagiat.ro/) - July 2016 – June 2019 - Softul Turnitin (https://www.turnitin.com/) accesible through the university's e-learning platform (https://elearning.unitbv.ro/) – from July 2019 until 31.08.2024. (Annex A.1.2.2-1, Annex A.1.2.2-2, A.1.2.2-3). For the doctoral field of Informatics, there have been 5 completed theses that have also been evaluated through anti-plagiarism systems. Individual evidence for theses completed during this period can be found in Annex A.1.2.2.
Recommendations: Update contracts for anti-plagiarism systems.
The indicator is fulfilled.

Standard A.1.3. The IOSUD makes sure that financial resources are used optimally, and the revenues obtained from doctoral studies are supplemented through additional funding besides governmental funding.

The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held during the visit from 4-6 September 2023.

Performance Indicator A.1.3.1. *Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.*
During the period prior to the evaluation, Prof. Sabin Tabirca is part of research groups in 5 interdisciplinary projects with international partners. These projects were ongoing at University College Cork (UCC) and involved interdisciplinary research topics between Informatics and Medicine (Annex 1.3.1).
Also, Assoc. Prof. Adrian Deaconu has completed a project aimed at optimizing the use of voltaic panels (PV) in different light conditions for different types of PV-s. The MPPT project for PV-s based on metaheuristic algorithm under contracted light (SDAforMPPT) is part of the European SPHERA III project under the H2020 program (Annex 1.3.1-b).
At the same time, through the affiliation of Prof. Nistor Grozavu, who has significant experience in writing, submitting and coordinating projects/programs/grants (Annex 1.3.1-c), the commission considers that there are prospects for successful grant submission.
At the time of the visit, there are no research grants in the field of Doctoral Studies in Informatics.

Recommendations: Increasing the number of projects/grants applied to be funded with project leaders within the field of Informatics and having as a beneficiary the Transilvania University of Brasov, increasing the involvement of students in research projects
Increasing the involvement and guidance from the University's Research Office in the doctoral field of Informatics, to complete, apply and improve the success rate of applications.
The indicator is partially fulfilled.

Performance Indicator *A.1.3.2. *The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%.*

Within the field of doctoral studies in Informatics, at the reference date of the evaluation file, there were a total of 9 doctoral students in different training periods (Annex A.1.3.2, Annex A..1.3.2-1). Of these, a number of 3 doctoral students completed their normal 3-year doctoral training, benefiting from additional legal, extension or grace periods, for the completion and public defence of doctoral theses. During these periods they no longer benefit from budget funding, and currently are doctoral students with tuition (as reported in CNFIS). [Table A.1.3.2-1] Table

A.1.3.1 – The centralized situation of PhD students from Informatics in the self-evaluation report presents the state of doctoral funding, the proportion of students receiving funding other than government funding being 40%.

Recommendations: It is recommended to maintain good practices and attract the socio-economic environment to finance the research of doctoral students.
The indicator is fulfilled.

Performance Indicator *A.1.3.3.[2] *At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).*

The provided documents show that the overall percentage calculated for the SDI, considering the entire reporting period (2016-2020), is 9.79%, close to the minimum limit of 10% provided by the analysed criterion.

At the same time, for the doctoral field of Informatics, the Transilvania University of Braşov stated that total revenues are 483,300 lei, and the expenses related to internal or external trips, conference and summer schools participation fees or equipment totalling 51,084 lei (A.1.3.3-1) is 10.57%.

Recommendations: Increase the amount invested in student participation in events relevant to the field in which they study
Broaden the horizon in student involvement in conferences
The indicator is fulfilled.

Criterion A.2. Research infrastructure

Standard A.2.1. The IOSUD has a modern research infrastructure to support the conduct of doctoral studies' specific activities.
The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held during the visit from 4-6 September 2023.

Performance Indicator A.2.1.1. *The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.*

SDI for the doctoral studies in Informatics has equipment for conducting research. The Informatics field holds spaces in the L6 laboratory and access to the software provided by the Institute for Research and Development (ICD) of the university. The institute's infrastructure is complex, comprising high-performance computers and servers for GPU and High Performance Computing (HPC) and Big Data

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[2] The indicators marked with an asterisk (*) hold a special status, referring exclusively to the evaluation of doctoral studies domains, as per Article 12 from the annex No.1 of the Order of the minister of education No. 3651/12.04.2021 approving the Methodology for evaluating university doctoral studies and the system of criteria, standards and performance indicators used in the evaluation. In case they are not met, the Agency extends a period of maximum 3 years to IOSUD to correct the respective deficiencies.

Storage, mobile devices and sensors for IoT applications. In 2020, with the help of a university grant and a sponsorship, 2 GPU servers were available for parallel processing (GPU) for scientific and machine learning applications. The list of facilities dedicated to doctoral research was detailed in [Annex 2.1.1], which was confirmed during the on-site visit. It is possible to access international publications electronically via Anelis Plus.

At the same time, within the Faculty of Mathematics and computer Science, we visited the Cornel Simionescu lecture hall, the PII6 reading room, the Kronsoft Laboratory, the Mondly lab where doctoral students work, but not only.

Recommendations: Increasing the number of spaces dedicated only to doctoral students
The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

Standard A.3.1. At the level of each domain there are sufficient qualified staff to ensure the conduct of doctoral study program.

The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the on-site discussions held during the visit from 4-6 September 2023.

Performance Indicator A.3.1.1. *Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.*

At the time of the elaboration of the self-evaluation report, within the doctoral field of Informatics, there are 3 doctoral supervisors, according to Table 3.1.1-1. The reports for verifying the compliance with the CNATDCU minimum standards in force at the time of the evaluation (according to OMENCS no. 6129 of 20.12.2016), required and compulsory for obtaining the habilitation certificate, are presented in Annex A.3.1.1. Prof. Ciurea retired in 2014, a year when CNATDCU standards were not reported. Moreover, this reporting was optional for retired PhD leaders and for this reason there is no activity reporting, which spans 40 years of research. However, Prof. Ciurea completed this report with research contributions for the last 5 years, fulfilling the requirement of at least 25% of the score (Annex A.3.1.1-1). Prof. Tabirca meets the CNATDCU minimum standards in force at the time of the evaluation [Annex 3.1.1 – 2], as well as the minimum standards

For the last 5 years [Annex 3.1.1-3]. Prof. Grozavu, full professor at CY Clergy University Paris, with the habilitation obtained at Sorbonne University of Paris, joined the SDI in February 2023 and does not yet have an official report of the CNATDCU file; however, he meets the global minimum standards (Annex 3.1.1-8) and the minimum standards for the last 5 years (Annex 3.1.1-9). Also, Assoc. Prof. Adrian Deaconu of the Department of Mathematics and Informatics of the Transilvania University, successfully defended his habilitation thesis in January 2023. His habilitation file was approved by the CNATDCU Informatics commission, and it will follow the flow of official approval in the CNATDCU council and the issuance of the Minister's order. We think that, by May or June 2023, the Minister's Order should be issued, hence Assoc. Prof. Adrian Deaconu may be considered a PhD supervisor starting with June 2023. Assoc. Prof. Deaconu meets the global minimum standards [Annex 3.1.1-5] and the minimum standards for the last 5 years [Annex 3.1.1-7].

At the same time, the doctoral field of Informatics has other perspectives for increasing the number of teachers: Prof. Nicoleta Rogovschi, full professor at the University of Paris Descartes applied for the recognition of the habilitation degree in February 2023. She obtained the right to supervise PhD studies at SDI Brasov, and in the near future she will follow the procedure of affiliation with SDI.

At the moment, there are at least 3 active associate professors or researchers who wish to become PhD supervisors at the Transilvania University's Doctoral School in Informatics. Assoc. Prof. Lucian Sasu, member of the Department of Mathematics and Informatics of the Transilvania University, aims to apply for

habilitation in the near future (2023 or 2024). Assoc. Prof. Sasu is very close to meeting the habilitation criteria. Dr. Tatiana Tabirca, former member of the Department of Mathematics and Informatics Science of the Transilvania University, currently a researcher in the MISL Laboratory of the University College Cork, has met 100% of these standards [Annex 3.1.1-6]. Dr. George Eleftherakis, director of doctoral programs at the University of Sheffield International Faculty, CITY College Thessaloniki, who has shown his openness and willingness to support the Faculty through teaching and research. He promised to start the official affiliation with SDI, and, in the near future to obtain the status of PhD supervisor for SDI Brasov.

Recommendations: Completion of the habilitation process for Dr. Lucian Sasu. Completion of the affiliation processes for Prof. Nicoleta Rogovschi, Dr. George Eleftherakis and Dr. Tatiana Tabirca.
The indicator is fulfilled.

Performance Indicator *A.3.1.2. *At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.*
- *description of the facts, the findings from the assessed institution's documents and the evaluation visit itself*
- *analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

According to the data presented in the previous criterion and in the Annexes: Annex A.3.1.2, Annex 3.1.2 -1 and A.3.1.2-2, at the time of drafting the evaluation report, within the doctoral field of Informatics, there are 4 doctoral supervisors, of which 2 are full members of IOSUD-Transilvania University of Brasov, 1 is retired and 1 is external.

Recommendations: Increase the number of full members affiliated to the SDI of Brasov.
The indicator is fulfilled.

Performance Indicator A.3.1.3. *The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.*

The subjects in the training programme based on advanced university studies related to the field are taught by teachers who have the status of doctoral supervisor with expertise proven through the lists of published papers in the relevant subjects. Evidence of this is provided [Annexes A3.1.3-4, A.3.1.3-5, A3.1.3-6, A.3.1.3-7, A.3.1.3-8, Annex A.3.1.3.]. Subject syllabi are not publicly available on the University or Faculty website.

Recommendations: It is recommended to increase the visibility of the subjects in the doctoral training programme, and thus increase the visibility of doctoral studies in informatics.
The indicator is fulfilled.

Performance Indicator *A.3.1.4. *The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs[3] does not exceed 20%.*

In the field of Informatics, no doctoral supervisor currently coordinates more than 8 doctoral students. Prof. Tabirca has 7 PhD students, but 5 of them are in their 4th or 5th year of study, currently working on writing the thesis. Prof. Ciurea, Prof. Grozavu and Assoc. Prof. Deaconu have no PhD student within the study cycle at the moment.

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[3] 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No.1/2011 with subsequent amendments and additions, with additional extension periods approved as per Article 39, paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.

Standard A.3.2. The Doctoral advisors within the domain are carrying out a scientific activity visible at international level.

Performance Indicator A.3.2.1. *At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of professional associations, membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.*

Performance Indicator *A.3.2.2. *At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years.*
- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself
- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Domain B. EDUCATIONAL EFFECTIVENESS

Criterion B.1. The number, quality and diversity of candidates enrolled for the admission contest

Standard B.1.1. The institution organizing doctoral studies has the capacity to attract candidates from outside the higher education institution or a number of candidates exceeding the number of seats available.
The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held online during the visit from 4-6 September 2023.

Performance Indicator *B.1.1.1. The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.*

At the level of the Interdisciplinary Doctoral School, data have been centralized that allow for the analysis of this coefficient for the last admission sessions to doctoral studies – Annex B.1.1.1-1 presents the data regarding this criterion at the level of the Interdisciplinary Doctoral School within IOSUDUTBV. At the level of the Informatics field, the statistical data for the period 2014-2018 are presented in Table B.1.1.1. from the self-evaluation report of the reported period. 5 budgeted places were allocated to the field of Informatics and there was a candidate, Delia Cuza, who graduated a master's programme from the A.I. Cuza University of Iasi. For the Informatics field, the percentage of this indicator, for the reported period 2016-2020, is 20%. Due to the low number of habilitated teachers, full members and affiliated to the SDI in the field of Informatics, no students were admitted in 2021 and 2022.

Recommendations: Increasing the visibility of the SDI, namely of the field of Informatics among the specialized master's programmes of the Transilvania University of Brasov and beyond
Opening places for the admission of students in the field of Informatics within SDI
The indicator is fulfilled.

Standard B.1.2 Candidates admitted to doctoral studies demonstrate academic, research and professional performance.
The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held online during the visit from 4-6 September 2023.

Performance Indicator *B.1.2.1. Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.*
Admission to doctoral studies is based on a competition, according to the admission methodology updated annually and approved by the Senate (https://www.unitbv.ro/documente/cercetare/doctoratpostdoctorat/ metodologiirapoarte/ Metodologia_de_admitere_la_doctorat_2021.pdf). It transposes at the level of the IOSUD – UTBV the provisions of the framework methodology on the organization of admission to the undergraduate, master and doctoral study cycles, approved by OMEC 6102/2016, with subsequent additions and amendments (ex 3199/2021).
The entry to the admission contest is conditional on the previous academic performance, namely an average of bachelor studies of at least 7 (seven) and an average of master's studies of at least 7 (seven), where applicable (Article 13.3). Eligibility for places financed from the state budget is conditioned by the average graduation of the bachelor cycle of at least 8.50 (arithmetic average between the average of the years of bachelor studies and the average of the bachelor exam) (Art. 13.4). The doctoral admission contest takes place in the form of a specialized examination with one or more tests (written or oral) specific to the doctoral field, of which an interview is mandatory. IOSUD UTBV applies a consistent quality policy, starting with the

selection and admission of candidates, starting from transparent, non-discriminatory criteria, but based on previous professional performance, the knowledge required to approach the doctoral topic, interest in research and the ability to draw up a research programme for solving the proposed theme (https://www.unitbv.ro/cercetare/doctoratpostdoctorat-siabilitare/admitere/tematica- admitere.html).

For the doctoral field in Informatics, admission consists of an oral test of knowledge specific to the research topic, followed by an interview in which the interest, determination and ability of candidates to work in research was tested.

Recommendations: Create a bonus mechanism for the admission mark for students who already have a published scientific paper.

The indicator is fulfilled.

Performance Indicator B.1.2.2. *The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission⁴ does not exceed 30%.*

The rate of expulsion of doctoral students in Informatics, including after giving up studies, 3 years after admission, within the field of Informatics is 0%. Annex B.1.2.2-1 presents the data on criterion B.1.2 at the level of the Interdisciplinary Doctoral School; the values for the dropout rates in the first 3 years after admission, calculated for the last 5 cohorts of doctoral students, registered in the years 2014, 2015, 2016, 2017 and 2018 range from 4.72 to 10.43%, with an average value for the 4 years of 7.98%.

Recommendations:

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

Standard B.2.1. The training program based on advanced university studies is appropriate to improve doctoral students' research skills and to strengthen ethical behavior in science.

The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held online during the visit from 4-6 September 2023.

Performance Indicator B.2.1.1. *The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.*

The training programme contains 4 subjects (Annex B.2.1.1-1), two of which are specialized subjects, "Software used in research and function theory" (Annex B.2.1.1-2) and "Process modelling" (Annex B.2.1.1-3), and two provide complementary competencies: "English Language in Science" (Annexes B.2.1.1-4, B.2.1.1-5) and "Ethics and academic integrity" (Annex B.2.1.1-6), as well as in the field of Mathematics. The subject "Software used in research" also includes the presentation of software to ensure the statistical processing of data, according to the requirement of this criterion (Annex B.2.1.1-2).

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.2. *At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.*

Within the doctoral programme, the subject "Ethics and academic integrity" is the subject dedicated to ethics in scientific research. Annex B.2.1.3 includes an example of an individual doctoral programme for first year doctoral students in the field of Informatics.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.3. *The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes", specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities[5].*

SDI has created mechanisms to ensure that the training programme based on advanced university studies, related to the field under assessment, targets the learning outcomes. Objectives, skills, knowledge, skills, responsibilities are specified. These aspects are mentioned in the subject syllabi (Annexes B.2.1.2-1 and B.2.1.2.-2). The mechanisms for evaluating learning outcomes are represented by taking exams and defending projects in the subjects covered by the curriculum.

Recommendations: Intensifying concerns for identifying the needs of doctoral students in internship in the field of doctoral studies in Informatics

The indicator is fulfilled.

Performance Indicator B.2.1.4. *All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.*

Doctoral students benefit from guidance throughout the doctoral training stage. Guidance committees for the area under assessment are set out in Annex B.2.1.4. Depending on the problems encountered, doctoral students conduct online and on-site discussions or exchanges by e-mail or other online means of communication. First and second year doctoral students are actively and regularly involved in weekly working meetings: "Reading week", in which doctoral students present research articles relevant to their field and participate in critical discussions e.g. positive or negative points, impact of contribution etc or "Tutorial week" in which doctoral students present a relevant chapter from a specialized book.

Recommendations: Enhancing institutional support, including from a financial point of view, for the capitalization of the results of doctoral studies, through the involvement of doctoral students and in interdisciplinary research.

The indicator is fulfilled.

Performance Indicator B.2.1.5. *For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.*

For the doctoral field of Informatics, Table B2.1.5 of the self-evaluation report presents the structure of the guidance committees for each doctoral student. At the time of the visit, 6 students have their doctoral studies in progress.. A total of 5 teachers have participated or are actively participating in the guidance of the 6 doctoral students enrolled in the doctoral cycle between years 1 and 4. As a result, the ratio between the number of doctoral students and the number of teachers involved in the examination and guidance committees is 6/5 = 1.2.

Recommendations: Diversifying guidance committees according to the needs of the students or the nature of the subjects chosen by them.

The indicator is fulfilled.

Criterion B.3. The results of doctoral studies and procedures for their evaluation.

Standard B.3.1. Doctoral students capitalize on the research through presentations at scientific conferences, scientific publications, technological transfer, patents, products and service orders.

The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the

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[5] Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology of 17 March 2017 regarding inscription and registration of higher education qualifications in the National Register of Qualifications in Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.

Performance Indicator B.3.1.1. *For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.*

In the last 5 years (2016-2020) in the doctoral field of Informatics, 4 doctoral theses have been defended by Claudia Șchiopu, Corina Nanau and Nicoleta Avenson, under the guidance of Prof. Eleonor Ciurea and by Arpad Kerestely, guided by Prof. Sabin Tabirca. The relevant contributions of these doctoral students, who have obtained their PhD degree in the last 5 years, are presented in the self-evaluation report. These amount to a number of 4+3+4+4 scientific papers with international reviewers, so the mentioned contributions of doctoral students are relevant and original.

Recommendations: Continuing the doctoral activity in order to complete the doctoral dissertations with relevant original contributions.

The indicator is fulfilled.

Performance Indicator *B.3.1.2. *The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.*

During this period, the four doctoral students who completed their studies were very active in research, taking part and publishing several articles in international conferences. This list is presented in the self-evaluation report from which we can infer that the ratio between the number of articles published in conferences and the number of students is 10/4 = 2.5, well above the limit of 1 for this indicator.

Recommendations: Continuing the relevant work with the PhD candidates in progress, so that they may complete their dissertations in good conditions.

The indicator is fulfilled.

Standard B.3.2. The Doctoral School engages a significant number of external scientific specialists in the commissions for public defense of doctoral theses in the analyzed domain.

The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held during the visit from 4-6 September 2023.

Performance Indicator *B.3.2.1. *The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.*

The number of doctoral dissertations allocated to a reviewer from another higher education institution was a maximum of 2 per year for all reviewers. For the two theses defended in 2020, the referees' committees are presented in Table B.3.2.1 of the self-evaluation report. Based on this table, it was noted that 2 doctoral theses were allocated to Acad Tomescu Ioan and Prof. Croitoru Cornel in 2020.

Recommendations: It is recommended to continue supporting doctoral students, so that they may complete their dissertations effectively.

The indicator is fulfilled.

Performance Indicator *B.3.2.2. *The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school*

should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.

In the field of Informatics under evaluation, there are four doctoral students who completed their doctoral studies at the time of submission of the file. The percentage is not calculated for a value lower than 10.

Recommendations: It is recommended to continue supporting doctoral students, so that they may complete their dissertations effectively.

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

The general description of the domain and its peculiarities are highlighted in the detail of the indicators of Section C. The following were used to this purpose: the analysis of the internal evaluation report of the doctoral study field in Informatics, the data and information available on the IOSUD-UTBV website, the additional annexes provided at the visit to supplement the file submitted to ARACIS, as well as the results of the visit to the Transilvania University of Brasov from 4-6 September 2023.

Criterion C.1. Existence and periodic implementation of the internal quality assurance system

Standard C.1.1. There are an institutional framework and procedures in place and relevant internal quality assurance policies, applied for monitoring the internal quality assurance.

The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held during the visit from 4-6 September 2023.

Performance Indicator C.1.1.1. *The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory:*

(a) the scientific work of Doctoral advisors;

(b) the infrastructure and logistics necessary to carry out the research activity;

(c) the procedures and subsequent rules based on which doctoral studies are organized;

d) the scientific activity of doctoral students;

e) the training program based on advanced academic studies of doctoral students;

f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

In order to assess and monitor the internal evolution of the Interdisciplinary Doctoral School (SDI) and the doctoral fields operating within the SDI, the following methodologies have been developed and implemented (covering the criteria/aspects mentioned in this indicator - the scientific activity of the doctoral leaders, the infrastructure and logistics required to carry out the research activity, the procedures and subsequent rules on whose basis the doctoral studies are organized): the methodology for the internal evaluation of the Interdisciplinary Doctoral School of IOSUD-UTBV (developed and applied in 2016); the methodology for the periodic internal evaluation of the activity of doctoral supervisors (developed and applied in 2018) [Annex C.1.1.1-4, Annex C.1.1.1-5, Annex C.1.1.1-3, Annex C.1.1.1-1, Annex C.1.1.1-2]. The internal evaluation process focused on the scientific and professional results of the doctoral supervisors and their recognition - impact; the evaluation indicators include: meeting the CNATDCU minimum standards required and mandatory for obtaining the habilitation certificate in force at the time of evaluation, the number and average duration of coordinated doctoral programmes, the number of articles published in WOS rated journals, the number of citations in WOS rated journals. The requested information was provided by the doctoral

supervisors by means of a self-assessment report on their activity (Annex C.1.1.1-5) and the report on the fulfillment of the habilitation standards (in order to facilitate the completion of the report, an online database was created on the intranet platform of the university - https://intranet.unitbv.ro/Cercetare- Scientific / Fisa-CNATDCU).

The evaluation committees have prepared synthetic reports on the activity of doctoral supervisors (Annex C.1.1.1-6, https://unitbv.ro/documente/cercetare/doctoratpostdoctorat/metodologiirapoarte/Raport_autoevaluare_activitate_conducatori_doctorat_2018.pdf)

The activity of doctoral students, regardless of the form of training and funding, is assessed on the basis of the IS-5 Specific Instruction of the SDI Regulation (Annex C.1.1.1-7). The results are reported through a database on the UTBV intranet (https://intranet.unitbv.ro/Cercetare/FRACS/Completare-FRACS); the FRACS structure is approved annually by the University senate (the report corresponding to the year 2020 - Annex C.1.1.1.8).

The Advanced University Studies training programme (Programul de pregatire bazat pe studii universitare avansate - PPUA) is assessed annually on the basis of the IS-7 specific Instruction of the SDI Regulation (Annex C.1.1.1-9).

The periodic evaluation of the support services for students is carried out on the basis of the methodology for the internal evaluation of the Interdisciplinary Doctoral School (see Appendix C.1.1.1- 1); the granting of these services (e.g. scholarships, mobility scholarships) is regulated by specific instructions, which are included in the quality management system of the university.

Starting with 2017, a scholarship programme was implemented to support international mobility (with a duration of at least 1 week and no more than 3 months), to conduct theoretical and experimental research in accordance with the topic of the doctoral programme and to participate in various types of events (e.g. summer schools). The programme is regulated by a specific instruction (Annex C.1.1.1-10)

Starting with the academic year 2018- 2019, the scholarships financed from the university's own funds are awarded on a competitive basis, and one scholarship is allocated for each doctoral field within IOSUD-UTBV, regardless of the form of education and the financing regime of doctoral students (this can be combined with the scholarship from the state budget.) The programme is regulated by a specific instruction (Annex C.1.1.1-11)

Counseling services provided to students from the Transilvania University of Brasov, and thus implicitly to PhD students, are provided based on the Instruction on career counseling activities within CICOC - Center for Information, Counseling and Career Guidance (Annex C.1.1.1-12)

Recommendations: Pursuing and thoroughly implementing the internal evaluation and monitoring practices of the activities within IOSUD-SDI UTBV, implicitly for the evaluated field.

The indicator is fulfilled.

Performance Indicator *C.1.1.2. *Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.*

SDI has created the functional tools for consulting doctoral students regarding their level of satisfaction with the doctoral study programme and identifying their needs in order to increase the quality. (https://www.unitbv.ro/documente/cercetare/doctoratpostdoctorat/ metodologii-rapoarte/v2/IS-7-Structura_continutul_PPUA_- v2.pdf).

The IS-7 instruction includes specific questionnaires for the opinion of doctoral supervisors (Form IS-7-F1) and doctoral students (Form IS-7-F2 – Annex C.1.1.2-1). The consultation of doctoral students (on an anonymous basis) was organized in 4 rounds: 2017 (paper questionnaires – 32 respondents), 2018 (paper questionnaires – 19 respondents), 2018 (online application – 79 respondents), 2021 (online application – 82 respondents). This report summarizes (Annex C.1.1.2-2a, Annex C.1.1.2-2b) the results achieved at the SDI level following the online consultations of 2018 (July) and 2021 (March-April). The results of the consultation of PhD students in the field of Informatics are presented synthetically in Annex C.1.1.2-3.

Recommendations: Continuing to implement good practices in the field.
The indicator is fulfilled.

Criterion C.2. Transparency of information and accessibility of learning resources

The analysis of the criterion was based on the self-evaluation file submitted to ARACIS, as well as the discussions held online during the visit from 4-6 September 2023.

Standard C.2.1. Information of interest to doctoral students, future candidates and public interest information is available for electronic format consultation.
Information of interest is available electronically on the UTB website, as well as specifically on the faculty website

Performance Indicator C.2.1.1. *The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:*
(a) the Doctoral School regulation;
(b) the admission regulation;
(c) the doctoral studies contract;
(d) the study completion regulation including the procedure for the public presentation of the thesis;
(e) the content of training program based on advanced academic studies;
(f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;
(g) the list of doctoral students within the domain with necessary information (year of registration; advisor);
(h) information on the standards for developing the doctoral thesis;
(i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.
- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself
- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

On the IOSUD-Transilvania University of Brasov website (https://www.unitbv.ro), which also includes a section dedicated to the Interdisciplinary Doctoral School (https://www.unitbv.ro/cercetare/doctoratpostdoctorat- si-abilitare.html), as well as on the intranet platform of the university – Doctorate section (https://intranet.unitbv.ro/Cercetare/Scoala-Doctorala-Interdisciplinara/Doctorat), all the information specified in this indicator are available for consultation, as follows:
a) https://unitbv.ro/documente/despre-unitbv/regulamente-hotarari/regulamenteleuniversitatii/studenti/Regulament_ul_scolii_doctorale_19.07.2017.pdf
b) https://www.unitbv.ro/documente/despre-unitbv/regulamente-hotarari/regulamenteleuniversitatii/studenti/Metodologie_admitere_doctorat_20.04.2022.pdf
c) https://www.unitbv.ro/documente/cercetare/doctoratpostdoctorat/contracte/Contract_studii_doctorale_2021_cu_acord_publicare.pdf
d) https://www.unitbv.ro/documente/cercetare/doctorat-postdoctorat/metodologii-rapoarte/v2/IS-8-Finalizare_si_sustinere_teze-2022_iunie_final.pdf
e) https://intranet.unitbv.ro/Cercetare/Scoala-Doctorala-Interdisciplinara/Doctorat/Programindividual-doctorat (secțiunea DISCIPLINE PPUA I - PREZENTARE)

f) https://www.unitbv.ro/cercetare/doctorat-postdoctorat-si-abilitare/despre-scoala-doctorala/domenii-dedoctorat-si-conducatori respectively https://www.unitbv.ro/cercetare/doctorat-postdoctorat-siabilitare/admitere/tematica-admitere.html

g) https://www.unitbv.ro/cercetare/doctorat-postdoctorat-si-abilitare/doctorat-si-postdoctorat.html respectively https://intranet.unitbv.ro/Cercetare/Scoala-Doctorala-Interdisciplinara/Doctorat/Doctoranzi-in-stagiu

h) https://www.unitbv.ro/documente/cercetare/doctorat-postdoctorat/anunturi/Ghid_elaborare_teza.pdf

i) https://w ww.unitbv.ro/research/doctorate-postdoctorat-si-habilitare/doctorat-si-habilitare/doctorat/sustinere-teza.html

Recommendations: Not applicable.
The indicator is fulfilled

Standard C.2.2. The IOSUD/The Doctoral School provides doctoral students with access to the resources needed for conducting doctoral studies.

The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held during the visit from 4-6 September 2023.

Performance Indicator C.2.2.1. *All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.*

- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself

- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

PhD students in Informatics have access to the Anelis database. The Transilvania University of Brasov/IOSUD-UTBV has benefited from permanent IP-based access and mobile access to electronic scientific information and documentation resources as specified in Annex C.2.2.1-2, Annex C.2.2.1-3, Annex C.2.2.1-4.

The Transilvania University of Brasov / IOSUD-UTBV is a contributing member to the implementation of the project under the SMIS code 102839 "National electronic access to scientific literature for supporting the research and education system in Romania – ANELIS PLUS 2020", which is implemented between 18.07.2017 – 17.07.2022 (https://anelisplus2020.anelisplus.ro/). Within the project, the Transilvania University of Brasov/ IOSUD-UTBV benefits from permanent IP-based access and mobile access to electronic scientific information and documentation resources as specified in Annex C.2.2.1-5.

Annex C.2.2.1-6 presents the status of databases subscribed by the ANELIS PLUS 2020 programme and their relevance for the doctoral fields within IOSUD-UTBV.

Recommendations: Ensuring continued access for doctoral students to a platform with relevant academic databases.
The indicator is fulfilled.

Performance Indicator C.2.2.2. *Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.*
   - description of the facts, the findings from the assessed institution's documents and the evaluation visit itself
   - analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

To strengthen educational actions in the Transilvania University of Brasov, within the institutional development project CNFIS-FDI-2018-0450: "Pragmatism and professionalism in education in the field of ethics of scientific research – the premise of authentic creativity" (Annex C.2.2.2-1), software services were purchased to verify the originality of the studies' completion works, through the Turnitin software, starting with 1.09.2018 (Annex C.2.2.2-2) for a period of 4 years, until 31.08.2022 (Annex A.1.2.2- 2).

Access is made through the university's e-learning platform (https://elearning.unitbv.ro) and is unlimited for all categories mentioned above. In order to ensure the use of Turnitin access, guides for using the similarity verification software were developed in three versions, in an accessible language – for students (Annex C.2.2.2-3), for teachers (Annex C.2.2.2-4).

Recommendations: Not applicable.
The indicator is fulfilled.

Performance Indicator C.2.2.3. *All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.*

The Faculty of Mathematics and Informatics operates in the P building, where two PI6 and PP9 laboratories are assigned to doctoral students, equipped with computers with internet access. In addition, the University Research Institute, the CC15 Research Center of the Faculty of Mathematics-Informatics, has spaces in the L6 laboratory equipped with computers with internet access.

Recommendations: Not applicable.
The indicator is fulfilled.

Criterion C.3. Internationalization

Standard C.3.1. There is a strategy in place and it is applied to enhance the internationalization of doctoral studies.

The analysis of the standard was based on the self-evaluation file submitted to ARACIS, as well as the discussions held during the visit from 4-6 September 2023.

Performance Indicator *C.3.1.1. *IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.*
   - description of the facts, the findings from the assessed institution's documents and the evaluation visit itself
   - analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Increasing the internationalization level of the university is a strategic objective assumed by the Strategic Plan of the Transilvania University of Brasov (https://www.unitbv.ro/ documente/ despreunitbv /info-interes-public/transparenta-institutionala/planuri/ planstrategic/Plan_strategic _2020-2024.pdf), an objective pursued coherently through specific programmes, actions and measures. In the IOSUD-UniTBv strategy, the intense promotion of internationalization actions is a means of increasing and diversifying the performance of the university community, implicitly of the quality of doctoral studies. The internationalization strategy of the Transilvania University of Brasov (https://www.unitbv.ro/documente/despre-unitbv/info-interespublic/ transparentainsitutionala/planuri/interna%C8%9Bionalizare/Strategia_de_internationalizare_lb._romana_ 2020- 2024.pdf) includes specific objectives, including the stimulation of participation of international teaching staff (and partnerships funded by international organizations).

Table C.3.1.1-2 of the self-evaluation report presents synthetic data on ERASMUS outgoing mobility of PhD supervisors in the reporting period – number of Informatics mobilities, a single doctoral student benefiting from such an internship.

Table 3.1.1-3. from the self-evaluation report presents synthetic data on external mobilities of PhD students (excluding ERASMUS mobilities) during the reporting period, number of Informatics mobilities, a single doctoral student benefiting from the internship.
Table 3.1.1-4. from the self-evaluation report presents synthetic data on external mobilities of PhD students (excluding ERASMUS mobilities) during the reporting period, number of Informatics mobilities, a single doctoral student benefiting from the internship.

The Doctoral field of Informatics has managed to establish research relations at an international level through institutional agreements such as Erasmus or through private agreements between researchers. In 2019, the Faculty of Mathematics and Informatics of the Transilvania University and the School of Computer Science and Information Technology of University College Cork (UCC), an Erasmus-type collaboration agreement was entered for the exchange of doctoral students and teachers.

Most PhD students in the evaluated field had at least one participation in an international scientific conference according to the discussions held at the time of the visit, the documents presented on site and the self-evaluation report.

Recommendations: *It is recommended to implement methods / tools for increasing the number of training internships abroad of doctoral students and to support them in order to participate in professional training internships at universities /* research institutes abroad or to participate in consortia of doctoral schools.

The indicator is fulfilled.

Performance Indicator C.3.1.2. *In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.*
- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself
- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

Within the IOSUD-SDI UTBV, through the field subjected to the evaluation, the organization of doctoral degrees under joint supervision is supported.

In the field of Informatics, there is no study programme organized under joint supervision at the time of the visit. At the level of IOSUD-SDI UTBV there are relevant documents supporting the actions to achieve joint supervision and the premises for inviting leading experts to UTBV (Annex 3.1.2-1, Annex C.3.1.2-2.)

In February 2018, the Interdisciplinary Doctoral School, in collaboration with the Faculty of Electrical Engineering and Computer Science, organized at ICDT a workshop on the topic of International Publications, specially designed for PhD students, held by prof. Louis François Pau of the Copenhagen Business School, Denmark. https://www.unitbv.ro/images/newsletter/NL_Martie_2018_complet_RO.pdf   .

Recommendations: Enhancing institutional support, including from a financial point of view, for the organization of doctoral degrees in international cooperation

The indicator is partially fulfilled.

Performance Indicator C.3.1.3. *The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees   etc.).*
- description of the facts, the findings from the assessed institution's documents and the evaluation visit itself
- analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself

The internationalization of activities within doctoral studies is generally achieved through participation in international conferences.

In Annex C.3.1.3-1, the list of foreign doctoral students enrolled at IOSUD- UniTBV who are in internship at the reporting date is presented. Annex C.3.1.3-2 presents the situation of the ERASMUS+ incoming international PhD students, who carried out traineeships/training/research within IOSUD UTBv during the reporting period. A conclusive example of IOSUD-UniTBv's actions to attract international doctoral students is the Transilvania Academica Scholarship (TAS) programme (https://tas.unitbv.ro/).

Recommendations: The inclusion of international experts in the public defence committees of doctoral theses (at the time of defending the dissertations) and in the guidance committees of doctoral students, while encouraging the drafting of theses in English or another language of international circulation;

The participation of representatives of the field subject to evaluation at international fairs, in order to increase the visibility of the evaluated field and attract international doctoral students, respectively the creation of premises for the organization of doctoral degrees in international cooperation, where the university / research center of origin of the guided PhD is located abroad.

The indicator is partially fulfilled

IV. SWOT Analysis

Strengths:	Weaknesses:
- Scientifically active PhD supervisors, with active collaborations at international level. - Close collaboration between doctoral students and doctoral supervisors - The possibility of interconnection with almost any other field, in the context of technology, digitalization and automation of life and processes - The continuous and accentuated training and involvement of PhD supervisors and the increase in the number of PhD supervisors within the SD-Informatics in recent years and their scientific quality. - The existence of a modern research infrastructure	- A low number of PhD supervisors - A low number of research projects involving PhD students Lack of foreign experts in the guidance committees / referee committees - The value of doctoral fellowships is small and generally not enough to ensure the doctoral students' subsistence during their study period - The number of foreign PhD students is 0 - Difficulties in completing the theses in three years, corroborated with practices of exceeding the deadlines provided in the plan for conducting the research and drafting the thesis (probably also due to the students' employment in companies) - The significant difference between the salary offered by IT companies and the level of doctoral scholarships offered by the Romanian state (leading to difficulties in retaining recent master's graduates)

<table>
<tr><td colspan="2"><u>Opportunities:</u></td><td colspan="2"><u>Threats:</u></td></tr>
<tr><td colspan="2">

- The opening of several companies towards cooperation with the academic environment may result in opportunities to take part in research projects, thus increasing the success rates of the submitted project applications.
- The possibility of attracting foreign PhD students if competitive financial resources are provided with other international universities
-

</td><td colspan="2">

- The very low number of calls for projects on a national level and the very low success rate make it difficult to win enough projects to provide another financing source for PhD students.
- Salaries for research assistants are quite low (compared to the economic environment in the IT field), which is why PhD studies are less sought by employees.
- The quite low number of PhD supervisors may be a limitation in terms of size of the Doctoral School and absorption of all good applicants
- The existence of a limited number of workplaces provided to PhD graduates in the academic environment or scientific research
- The decrease in the school population in Romania, with a long-term impact on the activity of doctoral schools

</td></tr>
</table>

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations

Nr. Crt.	Tip indicator (IP, IP*, IPC)	Indicator de performanță	Calificativ	Recomandări
1	IP	*A.1.3.1*	Partially fulfilled	*Increasing the number of projects/grants applied to be funded with project leaders within the field of Informatics and having as a beneficiary the Transilvania University of Brasov* *Increasing the involvement of students in research projects* *Increasing the involvement and guidance from the University's Research Office in the doctoral field*

| 2 | IP | *C.3.1.3* | Partially fulfilled | *Including international experts in the committees for the public defence of PhD dissertations (when dissertations are defended) and in the guidance committees, as well as encouraging students to draw up dissertations in English or another international language;* *Participation of the representatives of the field subject to evaluation in international fairs, with a view to increasing the visibility of the evaluated field and attracting international PhD students, as well as creating premises for the organisation of PhD studies under joint supervision, where the university/research center of the PhD student is abroad.* |

VI. Conclusions and general recommendations

Based on the findings of the evaluation team of the Informatics field, as presented in this report, we consider that UTB is a prestigious institution, capable of providing high confidence regarding the quality of education and scientific research, for the doctoral cycle of university studies. These statements also apply to the doctoral field in Informatics, and are supported by the following arguments:

- *Experienced and recognized researchers in the field, both nationally and internationally;*

- *The quality of scientific publications in which doctoral supervisors and doctoral students are involved;*

- *Support offered to PhD students through the research center and library for doctoral studies;*

Following the process of external evaluation at the level of the doctoral field in Informatics, the evaluation team provides the following recommendations:

- *Intensifying measures to increase the internationalization of doctoral studies (international guidance / defence committees, research internships abroad, international students, joint theses, etc.) in the next period 2023-2024-2025.*

- *Stimulating teachers for the transmission of several national and international project proposals to UTB in order to have more research projects carried out through UTB. The experience of DD collaborators can be used in submitting project proposals to other universities. Here you can involve the grant office at the university level: to be more active, to be more proactive in announcing project opportunities, to explain the requirements or indicators of each programme, to organize description and help sessions for national and especially international programmes. For Horizon Europe projects, the following approach can be good: to take over a winning project in H2020 (with work packages, etc.) and, with the consent of the authors, to disseminate it within UTB (perhaps with the signing of NDA agreements)*

- *Considering the opportunity to develop a research master's programme that is a channel for attracting students to the PhD studies. Some universities have adopted such "strategic" master's programmes with a lower minimum number of students enrolled in that master's degree. In this way, the university may have a short-term unprofitable programme, but, if it attracts and prepares good PhD students in the long run, it will increase the overall profitability of the department and its programmes. Current estimates show that 7% of the graduates from the UTB-Informatics Master's degrees pursue a doctoral programme; a research master's programme,, designed for long-term PhD, could increase this percentage.*

- *Consider boosting collaboration with companies in the area especially in the context in which POCIDF projects, that explicitly require collaboration with the industry, are imminent*

- *In the Individual Doctoral Studies Programme (PID), it seems that most courses are in the field of Mathematics; we suggest that most courses in PID should be in the field of Informatics. Considering that there are currently 4 PhD supervisors in Informatics, we suggest that each of them should teach a doctoral course so that all directions of research for doctoral supervisors in the field of Informatics can be harmoniously developed.*

- *The workload of most doctoral students seems to be significant, given that most of them are also employed as teaching assistants within the Department; we suggest that, in the final year of doctoral studies, doctoral students should benefit from a more flexible/limited schedule, perhaps a part time*

teaching load, to be able to complete their doctoral studies on time.

- *We suggest that colleagues in the department should inform themselves about the possibility of accessing research funds at local, regional and international level. For example, the component of the doctoral grant for the annual support of doctoral students in the amount of 4,500 lei or the opportunities in the ADR, PNIV or Horizon Europe.*

- *To develop more research projects with doctorates, jointly with* the industry

- *To continue the trend of increasing the number of doctoral supervisors with priority on doctoral supervisors who are full-time employees of the institution. Also, to accredit the habilitation of external doctoral leaders at the CNRED level not only at the UTB level, for full flexibility in the supervision of doctoral degrees in the field of Informatics.*

- *The self-evaluation reports in Romanian and English should contain equivalent information but it appears that this is not confirmed, for example, on page 39 of the Romanian report the number of completed students is 4 in the last 5 years, but on page 41 of the English report a number of 2 PhD students is specifie*

Following the visit from 04 to 06 September 2023, the evaluation team for the evaluation of doctoral studies in the field of Informatics at UTBV, based on the institution's self-evaluation documents and findings during the visit, concludes that the doctoral field of Informatics meets the mandatory normative requirements and performance standards and indicators according to the ARACIS methodology and, on this basis, creates suitable conditions for ensuring the quality of the doctoral school activities.

Therefore, the evaluation team for the evaluation of doctoral studies proposes to …………………………….. FOR THE DOCTORAL FIELD OF INFORMATICS

Prof. univ. dr. Jude HEMANTH
06.09.2023

Annex 1: Detailed programme of the evaluation visit.

Luni 4 septembrie 2023

10:00-10:30 sedinta de lucru a comisiei de inceput

10:30-11:00 intalnire cu conducerea facultatii

11:00-11:30 intalnire cu conducatorii de doctorat din cadrul scolii doctorale evaluate

11:30-12:00 sedinta de lucru a comisiei

12:00-14:00 pauza de pranz

14:00-14:30 sedinta de lucru a comisiei

14:30-15:30 intalnire cu conducerea departamentului, responsabilii programelor de master

15:30-16:30 sedinta de lucru a comisiei

16:30-17:30 intalnire cu studentii doctoranzi din scoala doctorala (se poate planifica si prin zoom/google meet daca e necesar)

17:30-18:00 intalnire cu absolventii programului doctoral (se poate planifica si prin zoom/google meet daca e necesar)

18:00-18:30 intalnire cu angajatorii studentilor doctoranzi din programul evaluat (se poate planifica si prin zoom/google meet daca e necesar)

18:30 19:00 sedinta de lucru a comisiei

Marti 5 septembrie 2023

9:00-12:00 sedinta de lucru a comisiei (vizitarea spatiilor de invatamant, laboratoare, secretariat, biblioteca, etc)

12:00-14:00 pauza de pranz

14:00-14:30 intalnire cu conducerea CSUD/membrii CEAC/membrii comisiei de etica

14:30-15:00 intalnire cu conducerea facultatii

15:00-17:00 sedinta de lucru a comisiei

Miercuri 6 septembrie 2023

10:00-12:00 sedinta de lucru a comisiei

12:00-14:00 pauza de pranz

14:00-15:00 prezentarea concluziilor si rapoartelor catre conducerea facultatii

15:00-16:00 finalizarea actelor si incheierea vizitei

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Nr. 175 din 26.07.2023

EXTRAS
din procesul verbal al ședinței de Senat din 26.07.2023

Senatul Universității Transilvania din Brașov, în ședința din data de 26.07.2023, a aprobat solicitarea Școlii doctorale interdisciplinare cu privire la 3 solicitări de afiliere la SDI:

- Conf. dr. Adrian Marius DEACONU – domeniul de doctorat Informatică
- Prof. dr. Jose Filipe VILELA VAZ – domeniul de doctorat Ingineria materialelor
- Conf dr. Nicoleta VOICU – domeniul de doctorat Matematică.

conform adresei nr. 9493/20.07.2023.

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Tabelul 1 prezinta situația cererilor studenților doctorali la domeniul Informatica, de participare la conferințe sau scoli de vara, ce au fost finanțate de către universitate. Totalul finanțării acestor studenți este de 27861 lei.

NR. CRT.	NR. ÎNREG.	SOLICITANT	AN ÎNM	SUBIECTUL SOLICITĂRII	Suma solicitată
1	1791/15.02.2018	SCHIOPU CAMELIA	2014	Decont taxă participare (380euro)+cazare (300euro) 5th International Conference on Control, Decision and Information Technologies (CoDIT 18) 10-13.04.2018 Thessaloniki, Grecia	680 €
2	5520/27.05.2019	KERESTELY ARPAD	2017	Taxă participare scoala de vara "Machine Learning and Applications Summer School", 22-26.07.2019 - 1430 lei, UTBv	1430 lei
3	5521/27.05.2019	MAJERCSIK LUCIANA	2017	Taxă participare scoala de vara "Machine Learning and Applications Summer School", 22-26.07.2019 - 1430 lei, UTBv	1430 lei
4	329/12.01.2021	KERESTELY ARPAD	2017	Decont taxă participare "36th International Business Information Management Association (IBIMA) Conference 2020" + publicare articol "Feature Inspection and Elimination in the Context of Breast Cancer Prediction"	295 $
5	497/11/12/2019	Vlad Ionescu	2019	Decont taxa participare MIT Sport Enterpreneurship Bootcamp, Sept 2019, Germany	20457 lei

Total incasari (granturi doctorale si taxe de scolarizare) – **483300 lei**

Total cheltuieli (deplasari interne si externe, taxe de participare conferinte si scoli de vara, echipamente) – **51084 lei**

Procent venituri/cheluieli – 10,57%

List of Research Projects

The PhD supervisors in the Informatics field are involved in the following research projects:

Prof dr Nistor Grozavu:

1. Principal Investigator, Pro-TEXT Research project, 2019-2024, French ANR Research Council, 500000 euros.
2. Investigator, ARENAS Research Project, 2022-2026, HORIZON 2022, 750000
3. Investigator, HERELLES Research Project, 2020-2024, French ANR Research Council, 500000 euros.

Prof dr Sabin Tabirca
1. Investigator, AI methods for Protein Engineering and Search, 2020-2026, Centre for Research Training in AI, University College Cork, Ireland, 150000 euros
2. Investigator, Intelligent Interventions for Prolapse, 2022-2025, Centre for Research Training in AI, Science Foundation Ireland, 100000 euros
3. Investigator, Virtual Reality Frameworks for Anxiety Assestment, 2019-2025, Advance Centre for Research Training, Science Foundation Ireland, Ireland, 150000 euros

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This is a situation with the PhD students enrolled in Interdisciplinary Doctoral School for 2023 and for the reported period 2018-2023.

Table 1 – List of PhD students enrolled in 2023

Nume Student	Superviser	Year of Study
Luciana Cărăbaneanu	Prof Sabin Tabirca	5
Vlad Ionescu	Prof Sabin Tabirca	4
Delia Duca	Prof Sabin Tabirca	4
Alex Codrin Ionescu	Prof Sabin Tabirca	4
Claudia Glodan	Prof SabinTabirca	3
Delia Cuza	Prof SabinTabirca	3

Table 2 – List of PhD students enrolled between 2018-2023

	Student	Superviser	Year of Study	Scholarship
1.	Marius Paltanea	Prof Sabin Tabirca	Exmatriculated	No
2.	Luciana Cărăbaneanu	Prof Sabin Tabirca	5	No
3.	Arpad Kerestely	Prof Sabin Tabirca	Finalized	State + Siemens Scolarship [Anexa 1.3.2-b3]
4.	Vlad Ionescu	Prof Sabin Tabirca	4	State scholarship

5	Delia Duca	Prof Sabin Tabirca	4	State + University Scholarship
6	Alex Codrin Ionescu	Prof Sabin Tabirca	4	No
7	Claudia Glodan	Prof SabinTabirca	3	Scholarship
8	Delia Cuza	Prof SabinTabirca	3	No
9	Corina Nanau	Prof Eleonor Ciurea	Finalized	No
10	Camelia Schiopu	Prof Eleonor Ciurea	Finalized	University Scholarship
11	Nicoleta Avesalon	Prof Eleonor Ciurea	Finalized	No

ANNEX 3: PICTURES