

## **The International expert Report of Electrical Engineering doctoral domain.**

### **I. Introduction<sup>1</sup>**

In this chapter, the following shall be summarized:

- the context in which this external evaluation report was drafted (**the type of evaluation, the period of the evaluation visit, the composition of the Experts Committee** etc.);
- details about the doctoral school(s) of which the doctoral domain under review is part (number of doctoral advisors, number of students, institutional context, short history etc.);
- details about the doctoral study domain under review (number of students, institutional context, short history etc.).

See the common report of the three experts (EER).

I would like to emphasize:

- very good organization (including simultaneous translation)
- on-line meetings not as efficient as real meetings (according to my other experiences in quality assessment)
- doctoral study domain in environmental engineering of relatively small size

### **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;

---

<sup>1</sup> Each time when applicable the information shall be presented gender-wise.



- 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.

[See common EER.](#)

### **III. Analysis of ARACIS's performance indicators**

#### **Domain A. INSTITUTIONAL CAPACITY**

*\*general description of domain analysis.*

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

*\*general description of the criterion analysis.*

*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.*

*\*general description of the standard analysis.*

**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

*All the documents exist. The procedures are very well documented and followed. However, there is little indication of "strategic reflections" at CSD level. Maybe the excess of procedures is the reason for this absence of indications on strategic issues.*

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

Recommendations:

**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 visit itself

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

*See above: excess of regulation tends to hamper strategic reflection.*

Recommendations:

**The indicator is fulfilled.**

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

\*general description of the standard analysis.

**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 visit itself

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



*The SER provides lots of data, but little analysis of these data (for instance, do we have enough PhD graduates compared to PhD students?). Is a duration of three years appropriate if most of the PhD cannot graduate in three years time?*

*I am still waiting for a longitudinal analysis of the tracks of the PhD students, which was promised to me.*

*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*

*Recommendations:*

*Do not rely too much on software to detect plagiarism since there also exist AI programs that mask plagiarism (see article by John Ross in Times Higher Education, July 8, 2021).*

**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.*

*\*general description of the standard analysis.*

**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.*

*- 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*

*We have had evidence of research grants during our meetings.*

*Recommendations:*

**The indicator is 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%.*

*- 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 SER gives evidence for 23.1%, computed on the whole reporting period*

*Recommendations:*

**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.).*

*- 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 SER provides evidence that this indicator is fulfilled.*

*Recommendations:*

**The indicator is fulfilled.**

## **Criterion A.2. Research infrastructure**

*\*general description of the criterion analysis.*

*Standard A.2.1. The IOSUD has a modern research infrastructure to support the conduct of doctoral studies' specific activities.*

*\*general description of the standard analysis.*

**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.*

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

*Evidence given in the SER is OK. Meetings with students confirmed that they benefit from good research infrastructure (comparable to France for one PhD student that went on ERASMUS in France).*

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

*Unfortunately, I was not part of the visit.*

*Recommendations:*

**The indicator is fulfilled.**

---

<sup>2</sup> 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.



### **Criterion A.3. Quality of Human Resources**

*\*general description of the criterion analysis.*

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

*\*general description of the standard analysis.*

**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.*

*- 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 SER provides evidence that the criterion is met.*

*Recommendations:*

***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*

*Recommendations:*

*See above*

***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.*

*- 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 SER provides evidence that this indicator is fulfilled.*

*Recommendations:*

***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<sup>3</sup> does not exceed 20%.*

- 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 SER provides evidence that this indicator is fulfilled.*

Recommendations:

**The indicator is fulfilled.**

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

*\*general description of the standard analysis.*

**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.*

- 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 SER provides evidence that this indicator is fulfilled.*

Recommendations:

**The indicator is fulfilled.**

**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.*

---

<sup>3</sup> 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.





- 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 SER provides evidence that this indicator is fulfilled.*

Recommendations:

**The indicator is fulfilled.**

## **Domain B. EDUCATIONAL EFFECTIVENESS**

*\*general description of domain analysis.*

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

*\*general description of the criterion analysis.*

*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.*

*\*general description of the standard analysis.*

**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.*

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

*The SER provides evidence that the first ratio is higher than 0.2. Our discussions also showed that there are indeed PhD students which come with another financial support than the state budget (EU projects, company support,...)*

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

Recommendations:

**The indicator is fulfilled.**

*Standard B.1.2 Candidates admitted to doctoral studies demonstrate academic, research and professional performance.*

*\*general description of the standard analysis.*

**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.*





- 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 SER describes the admission procedure, defined at IOSUD level, not dependent of the domain, which satisfies the indicator. In addition, our meetings with PhD students showed that they had indeed a strong motivation for research, which was at the basis of their application for a PhD. In electrical engineering, discussions with directors of research centres and labs indicated that 50% of PhD students applied for a PhD after some years of professional work in a company, which is also an indication of strong interest in research.*

*Recommendations:*

**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 admission<sup>4</sup> does not exceed 30%.*

- 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

*This indicator poses a problem to me. According to the numbers in the SER, there are many more students admitted to PhD than PhD graduates. Although few students are formally expelled or explicitly drop out, I am not sure of what happens with candidates who have been registered for over 8 years...*

*Recommendations:*

**The indicator is partially fulfilled.**

## **Criterion B.2. The content of doctoral programs**

*\*general description of the criterion analysis.*

*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.*

*\*general description of the standard analysis.*

**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.*

- 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

*This indicator is also an issue for me. The training program, which is concentrated in the first semester of The PhD track, consist mainly in a course on ethics, a course in research methodology and three courses*

---

<sup>4</sup> 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.



*in specific disciplines linked with the thesis subject. Most of these courses are also accessible to Master students, which does not give enough evidence that they contribute to a training at level 8 of the European qualification framework.*

*The training program is only discussed between the PhD student and the supervisor.*

*A significant exception to this is the ANTREDOC project, which has been discussed in several of our meetings and is a great opportunity for PhD and Post-doc students to be trained in specific entrepreneurial skills. This project has been praised by all participants to it, notably because it is also a fantastic opportunity to meet with PhD from other disciplines, which is something most students regret not to have enough opportunities to do.*

**Recommendations:**

*I recommend that the doctoral study domain organizes specific courses for PhD students, some of them given by foreign lecturers or by members of private companies. These courses should ideally be followed by most of the PhD students of the domain, independently of their thesis subjects and should also be followed at any moment during the PhD studies (not only during first semester). Some occurrences of such courses have been mentioned in El. Eng. (given either by staff of TUCN or by external guests – see also annex C.3.1.2.b) but it is by no way systematic, and it should become so!*

**The indicator is partially 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.*

*- 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*

*A course on ethics is indeed part of the training program. However, in the SER, the following sentence appears:*

*„Currently doctoral students have the opportunity to take part in any of the Ethics disciplines included in the master's programs.”*

*It is unclear to me whether students who have already taken an ethics course during their master program simply add another ethics course of the master's program, and in this case, what do they really achieve as NEW learning outcomes.*

**Recommendations:**

**The indicator is partially 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<sup>5</sup>.*

---

<sup>5</sup> 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.



- 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 basis document for this indicator is, as I understand, the following: [http://iosud.utcluj.ro/files/Files/Legilsatie%202021/Procedura%20asigurarea%20indeplinirii%20calificarii%20nivel%208\\_11.05.21.pdf](http://iosud.utcluj.ro/files/Files/Legilsatie%202021/Procedura%20asigurarea%20indeplinirii%20calificarii%20nivel%208_11.05.21.pdf)

which I browsed through with my partial understanding of Romanian. The SER refers to this document, but in our discussions on learning outcomes or on level 8 of the NQF (or EQF), nobody referred to, for example, the interesting diagram on pages 19 and 20 of this document. There is not enough evidence that this procedural document indeed meets its objectives.

Recommendations:

**The indicator is partially 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.

- 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 role of the guiding commission has been underlined at multiple occasions during our visit. However, I am not sure whether this guidance commission continues to guide the PhD student after the first three years of the PhD program.

Recommendations:

**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.

- 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 SER provides evidence that this indicator is fulfilled.

Recommendations:

**The indicator is fulfilled.**

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

*\*general description of the criterion analysis.*

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

---



*\*general description of the standard analysis.*

**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.*

*- 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*

*El. Eng. : list of papers seems to provide requested evidence*

*Recommendations:*

**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.*

*- 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*

*Ratio OK but 9 persons (out of 33) did not present anything, and most of the presentations at international conferences organized in Romania.*

*Recommendations:*

*Make sure that every PhD graduate has had the opportunity to present his research at least once at an international conference.*

**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.*

*\*general description of the standard analysis.*

**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.*

*- 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 SER provides evidence that this indicator is fulfilled.*

*Recommendations:*

**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.*

- 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 SER provides evidence that this indicator is fulfilled.*

*Recommendations:*

**The indicator is fulfilled.**

## **Domain C. QUALITY MANAGEMENT**

*\*general description of domain analysis.*

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

*\*general description of the criterion analysis.*

*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.*

*\*general description of the standard analysis.*

**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

*Procedures exist for the evaluation of different aspects of quality of the Doctoral school. Lots of forms and data are collected but there is not great evidence, in the SER, that the results of these evaluations are analysed and that actions for quality improvement are taken.*



Recommendations:

**The indicator is fulfilled/~~partially fulfilled~~/not 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.

- 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

*Instead of referring to an action plan in annex, I think that the SER would have been the right place to **describe and discuss** this action plan in some detail. Besides, from my understanding of the written Romanian language (and the help of Google Translate) the proposed action plan is rather a set of objectives but one cannot really see what actions will be effectively taken to reach these objectives.*

Recommendations:

**The indicator is fulfilled.**

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

*\*general description of the criterion analysis.*

*Standard C.2.1. Information of interest to doctoral students, future candidates and public interest information is available for electronic format consultation.*

*\*general description of the standard analysis.*

**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

*The SER gives evidence that this indicator is fulfilled. In addition, during our meetings, PhD students confirmed that they had a very good access to information and learning resources at every stage of their doctoral studies (including prior to admission).*

Recommendations:

**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.

\*general description of the standard analysis.

**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

*The SER provides evidence that this indicator is fulfilled.*

Recommendations:

**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

*The SER provides evidence that this indicator is fulfilled.*

Recommendations:

**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.

- 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 SER provides evidence that **procedures** exist which allow all doctoral students access to research laboratories.*

Recommendations:

**The indicator is fulfilled.**

### **Criterion C.3. Internationalization**





*\*general description of the criterion analysis.*

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

*\*general description of the standard analysis.*

**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

*The proposed evidence points out to a great number of international conferences, but there is no evidence that these conferences were held outside Romania, which would be preferable for a real international experience.*

*Recommendations:*

*Make sure that every PhD graduate has had the opportunity to present his research at least once at an international conference abroad.*

**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

*There is evidence of three jointly supervised theses (international co-tutelage) and a significant number of seminars given by foreign experts.*

*Recommendations:*

**The indicator is 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 SER provides evidence that this indicator is fulfilled.

Recommendations:

**The indicator is fulfilled.**

#### IV. SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Good employment possibilities for PhD graduates</li> <li>• Large team of supervisors</li> <li>• Collaborations with faculty of automotive, mechatronics and mechanics (solar vehicle?)</li> <li>• ANTREDOC project</li> <li>• Quality of research infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Ratio between graduates and PhD students too low</li> <li>• Public defence of thesis is not always organised</li> <li>• PhD seminars not organised in a systematic form</li> <li>• Few graduate courses at PhD level</li> <li>• Too few contacts among PhD students</li> <li>• Quality evaluation of PPAU (level 8) not strong enough</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• EUt+ can enhance the internationalisation of the graduate school</li> <li>• Merge with Baia Mare could foster new research areas in AI + humanities</li> <li>• Consortium of companies in Cluj area being established</li> <li>• Funding exists for conferences and publications</li> <li>• Long list of international contacts is opportunity to organise real PhD courses by invited lecturers</li> <li>• A single doctoral school (where domain representatives meet) could facilitate interdisciplinary subjects</li> </ul>	<ul style="list-style-type: none"> <li>• Duration of PhD and requirements in production are contradictory and do not guarantee quality research</li> <li>• Too many regulations and procedures hide weaknesses and make the strategy not visible</li> </ul>

#### V. Overview of judgments awarded and of the recommendations

See EER.



*The recommendations contained in the report shall be resumed in the indicators' analysis. Other general recommendations may be made that do not fit within a particular indicator.*

*VERY IMPORTANT!!! – Each identified weakness must be correlated with at least one recommendation to improve the situation!*

## **VI. Conclusions and general recommendations**

*See EER*

*More thoughts (Times Higher Education, July 16, 2021):*

“One of the world’s most prestigious research funders has told academics that they must not include journal impact factors (JIF) in their applications, in the latest sign that the controversial metric has become discredited.”