

The External Evaluation Report of a Doctoral Study Domain

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I. Introduction¹

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.). The evaluation was carried out for the Electrical Engineering doctoral domain in the period from 15.11.-20.11.2021. The panel members were prof. G. Lazaroiu, prof. K. Miličević and student member T. Lupu.
- Introduction according to the self-assessment document:
- The Engineering Sciences Doctoral School (SD) (Annex II.A.) operates under this name starting with the academic year 2011- 2012 (SD no. 170 of 12.09.2011-Annex 11, according to ROFSUD, art.6, paragraph (3) – Annex II.A.a.), with doctoral studies in the fundamental fields of Engineering Science and Mathematics and Natural Sciences, doctoral fields Agronomy, Electrical Engineering, Electronics Engineering Telecommunications and Information Technology, Energy Engineering, Industrial Engineering, Engineering and Management and Mathematics.
- The doctoral field Energy Engineering was established starting with 1994 in the same time with the approval of technical sciences doctoral studies (OM 5363/1994- Annex II.A.c.), The following doctoral supervisors have been active over time:
- Prof.univ.dr.ing. Ioan FELEA (OM no.5371/10.02.1994 - associate)
- Prof.univ.dr.ing. Gheorghe-Constantin IONESCU (OMECT no. 1805/20.08.2007 - tenured),.
- Currently (2020-2021), at the Doctoral School of Engineering Sciences, Doctoral field of Energy Engineering there are enrolled a number of 12 PhD students. Between 2016-2020, a number of 3 doctoral students have publicly defended their doctoral thesis, and obtained the scientific title of doctor in Energy Engineering, being confirmed by CNATDCU.

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



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.

The methods and tools used in the external evaluation process included:

- The analysis of the internal evaluation report of the doctoral study domain under review and its Annexes;
- The analysis of documents, data and information available on the IOSUD/Doctoral School(s) website, in electronic format;
- Online preliminary meeting for the preparation and harmonization of evaluation steps, in hybrid mode, of doctoral study domains and IOSUD;
- Online meeting with representatives of the institution and of the Council for Academic Doctoral Studies (CSUD);
- Online meeting with the contact person for the doctoral study domain under review and the team who drafted the internal evaluation report;



- Online meeting with Doctoral Schools Council (CSD members);
- Online meeting with PhD students;
- Online meeting with the academic staff corresponding to the doctoral study domain;
- Online meeting with the members of the Ethics Commission;
- Online meeting with the Directors/ persons in charge of the research centers/laboratories within the doctoral study domain;
- Online meeting with employers of Doctoral graduates in the domain;
- Online meeting with graduates for the respective doctoral study domain;
- Internal domain evaluation panel meetings;

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

Recommendations: None

The indicator is fulfilled.

The institution organizing doctoral studies (IOSUD) has implemented the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies. It has provided as annexes of self-assessment



document all needed documents:

a) Regulation on the organization and conduct of doctoral studies and postdoctoral programs at IOSUD_UO, in force at the time of the internal evaluation, adopted by the Decision of the University Senate number 14 of 28.01.2021, being available for consultation on the website of IOSUD

(<https://www.uoradea.ro/display22980>), respectively in Annex II.A.1 .;

The regulation of organization and development of doctoral university studies at the level of the Doctoral School of ENGINEERING SCIENCES. was adopted by CSUD Decision and is available for consultation on the Doctoral school website.

(<https://webcache.googleusercontent.com/search?q=cache:ABjB462LBlkJ:https://doctorat.uoradea.ro/ro/documente/reglementari/reglementari-interne+&cd=1&hl=ro&ct=clnk&gl=ro>), respectively in Annex II.A.1.1.;

b). The methodology for organizing the elections and appointing the members of the Council and the director of the Doctoral School from I.O.S.U.D. - University of Oradea, in force at the date of the internal evaluation, was adopted by the Decision of the University Senate number 11 of 26.10.2020 Annex 13, being available for consultation on the IOSUD website

(<https://www.uoradea.ro/display12788>) (Annex II.A.2). The documents proving the conduct of the elections of the Doctoral Schools Councils and the elections/appointment of the Directors of the Doctoral Schools are found in Annex II.A.3- Evidence of elections at SD level;

c). The methodology for organizing and conducting the competition for admission to doctoral studies at the level of IOSUD_UO, in force at the time of the internal evaluation, was adopted by the Decision of the University Senate number 16 of 25.03.2021, being available for consultation on the website of IOSUD I (<https://cloud.uoradea.ro/index.php/sFKi3fGrijjPBJ4z#pdfviewer>), respectively in Annex II.A.4;

The admission methodologies of the Doctoral Schools have been adopted by CSUD Decision and are available for consultation on the IOSUD website (<https://cloud.uoradea.ro/index.php/s8HRsrqNmwiwmLzz#pdfviewe>), respectively in Annex II.A.4.1.

The methodology regarding the admission and schooling of Romanians everywhere for doctoral studies starting with the academic year 2021 - 2022, in force at the date of the internal evaluation, was adopted by the Decision of the University Senate number 16 of 25.03.2021, being available for consultation on IOSUD website (<https://doctorat.uoradea.ro/ro/>), respectively in Annex II.A.5;

The methodology regarding the admission and schooling of foreign citizens starting with the academic year 2021-2022 in force at the date of the internal evaluation, was adopted by the Decision of the University Senate number 16 of 25.03.2021, being available for consultation on the IOSUD website (<https://doctorat.uoradea.ro/ro/>), respectively in Annex II.A.6.;

d). The operational procedure regarding the recognition of the doctoral degree in sciences or in a professional field, obtained abroad, in force at the date of the internal evaluation, was adopted by the Decision of the University Senate number 19 of 27.03.2017, being available for consultation on the IOSUD website (<https://www.uoradea.ro/display12986>), respectively in Annex II.A.7;

The operational procedure regarding the automatic recognition by the University of Oradea of the quality of doctoral supervisor obtained in university educational institutions accredited from abroad, in force at the date of the internal evaluation, was adopted by the Decision of the University Senate number 19 of 27.03.2017, being available for consultation on the IOSUD website (<https://www.uoradea.ro/display/12989>), respectively in Annex II.A.8.;

e). Regarding the organization of the meetings at the level of the Doctoral School of ENGINEERING SCIENCES, they take place as many times as necessary, but at least three times a year. The supporting documents are presented in Anexa II.A.9.1 f). The Doctoral Studies Contract is Annex 1 to ROFSUD (<https://www.uoradea.ro/display/17406>), for example, a model is presented in Annex II.A.10.

g). Internal procedures for analysis and approval of proposals on the topic of doctoral university study programs (Regulations of the ENGINEERING SCIENCES Doctoral School) (Anexa II.A.1.)

The meetings did not raise any doubts about effective functioning mechanisms. It is important to mention, as a good practice, that at the IOSUD level, the University of Oradea has several additional internal regulations.

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

Recommendations: None

The indicator is fulfilled

According to the self-assessment document, the criteria, procedures, and mandatory standards for the aspects specified in art.17, par. 5 of GD681/2011 are regulated as follows:

a) the acceptance of new doctoral supervising members, as well as regulations regarding the way in which a doctoral supervisor can be withdrawn as a member of the doctoral school, are regulated in the Regulation on granting and revoking the membership of Doctoral Schools, approved by Decision Senate 33 of 26.03.2018 Annex II.A.15 (<https://www.uoradea.ro/display/16171>)

b) the mechanisms by which decisions are taken on the appropriateness, structure and content of the training program based on advanced university studies are provided in paragraph 3.2.3 (art. 31 and art. 32, respectively) of the Regulation on the organization and conduct of university studies, doctorate and postdoctoral programs Annex II.A.1. (<https://www.uoradea.ro/display/22980>);

c) the procedures for changing the doctoral supervisor of a certain doctoral student and the procedures for mediating conflicts are regulated in art. 34 para. 2, art. 38 and respectively art. 27 of the Regulation on the organization and



conduct of doctoral studies and postdoctoral programs Annex II.A.1

(<https://www.uoradea.ro/display/22980>);

d) the conditions under which the doctoral program can be interrupted are regulated in paragraph 3.1.1. Duration of the cycle of doctoral university studies, art. 24 of the Regulation on the organization and development of doctoral studies and postdoctoral programs (Annex II.A.1 (<https://www.uoradea.ro/display/22980>));

e) the ways to prevent fraud in scientific research, including plagiarism are regulated in the Code of Ethics and University Ethics of the University of Oradea ((<https://www.uoradea.ro/display/23004> – Annex II.A.17.) and the sanctions in case of non-compliance with the quality or professional ethics standards are provided in art. 77 of the Regulation on the organization and conduct of doctoral studies and postdoctoral programs Annex II.A.1 (<https://www.uoradea.ro/display/22980>);

f) ensuring access to research resources is regulated in art. 68 of the Regulation on the organization and conduct of doctoral studies and postdoctoral programs and respectively art. 6.1 Obligations of IOSUD UO from the Contract for Doctoral Studies

- Annex 1 to the Regulation on the organization and conduct of doctoral studies and postdoctoral programs Annex II.A.1 (<https://www.uoradea.ro/display/22980>);

g) the attendance obligations of the doctoral students, according to a methodology elaborated by the Ministry of National Education, are established at the level of each Doctoral School ENGINEERING SCIENCES (Annex II.A.1)

The meetings did not raise any doubts about the indicator.

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

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, for the record of doctoral students and their academic career IOSUD uses the online system UNIWEB. The meetings have confirmed that the system is functional.

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: None



The indicator is fulfilled.

According to the self-assessment document, IOSUD The University of Oradea uses on a contract basis the anti-plagiarism system provided by SC SISTEM ANTIPLAGIAT PRIN INTERNET SRL through the online platform <https://www.sistemantiplagiat.ro> (Annex II.A.19.). The system for detecting similarities made available to doctoral schools within IOSUD University of Oradea is included in the MNCS Order no. 3485/2016 - the list of programs recognized by CNATDCU and used at the level of higher education institutions organizing doctoral university studies and of the Romanian Academy, in order to establish the degree of similarity. The meetings have confirmed that the system is functional.

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

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document and additionally requested data, PhD students from DD-IEN are currently involved in:

a. "SmartDoct - High quality programs for doctoral students and postdoctoral researchers of the University of Oradea to increase the relevance of research and innovation in the context of the regional economy", Project Code: 123008, 2019-2021; 19.06.2019 - 18.12.2021 (30 months)

<https://smartdoct.uoradea.ro/>

b. Title "ESTABLISHMENT OF BIHOR SCIENCE AND TECHNOLOGY PARK" within the Regional Operational Program 2014- 2020, Priority Axis 1 "Promotion of technology transfer", Investment Priority 1.1, Operation B, Call for projects no. POR / 2018/1

2014-2020

c. Title "DEVELOPMENT OF THE TECHNOLOGY TRANSFER CENTER OF THE UNIVERSITY OF ORADEA - SMART

INDUSTRIES" within the Regional Operational Program 2014-2020, Priority Axis 1 "Promoting technology transfer", Investment priority 1.1. A, Call for projects POR / 439/1/1 / Increasing innovation in companies by supporting innovation and technology transfer entities in fields of intelligent specialization. University of Oradea 2014-2020.

The meetings did not raise any doubts about the indicator.

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

Recommendations: Record and analyze data relevant for this indicator

The indicator is partially fulfilled.

Based on available information, it seems that there is a system of additional funding, but in the self-assessment document the calculation of the indicator was not clear. Therefore, an additional explanation was requested. However, this did not lead to clear information provided by the IOSUD/Doctoral school. Conclusively, the indicator can be evaluated as partially 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.).*

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.

- 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: Record and analyze data relevant for this indicator

The indicator is partially fulfilled.

Based on available information, it seems that percentage of grants 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.), but in the self-assessment document the calculation of the indicator was not clear. Therefore, an additional explanation was requested. However, this did not lead to clear information provided by the IOSUD/Doctoral school. Conclusively, the indicator can be evaluated as partially 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

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

Recommendations: None

The indicator is fulfilled.

The self-assessment document and the meetings:

- Online meeting with PhD students;
 - Online meeting with the Directors/ persons in charge of the research centers/laboratories within the doctoral study domain;
 - Online meeting with employers of Doctoral graduates in the domain;
 - Online meeting with graduates for the respective doctoral study domain;
- have confirmed the satisfaction with the equipment and the resources in general.

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

Recommendations: Motivate and support teaching staff to reach the status of doctoral supervisor

The indicator is partially fulfilled.

The doctoral field Energy Engineering has been operating at IOSUD UO since 2002, within which the following doctoral supervisors have been active over time:

1. Prof.univ.dr.ing. IOAN FELEA
2. Prof.univ.dr.ing. GHEORGHE IONESCU

At the level of 2020/2021 academic year, according to the State of functions (Annex II.A.24.), the activity at doctoral university studies is supported by teaching staff who meet the legal conditions, have the minimum teaching title of lecturer doctor and are specialists in the field of doctoral topic being supervised (in the case of members of the supervising committees), and have the status of doctoral supervisor obtained by Ministerial Order (in the case of doctoral supervisors).

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: Motivate and support teaching staff to reach the status of doctoral supervisor

The indicator is partially fulfilled.



As it results from the table Information on the situation of doctoral supervisors within the evaluated doctoral field presented in the previous indicator, a number of 1 doctoral supervisors are holders out of a total number of 2 doctoral supervisors. However, the 2 doctoral supervisors are not sufficient according to the previous indicator. Thus, this indicator is partially fulfilled as well.

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 itse*
- *Recommendations: Nonelf*

The indicator is fulfilled.

According to the self-assessment document, the disciplines in the training program based on advanced university studies related to the field are supported by teachers or researchers who have the quality of doctoral/qualified supervisor, professor or associate professor with proven expertise in the field of taught subjects or, in exceptional cases, other tenured teachers or specialists from outside higher education and research systems.

The meetings did not raise any doubts about the indicator.

*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 programs³ 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*

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, out of the total of 2 doctoral supervisors in the field ENERGY ENGINEERING, there are no supervisors who have more than 8 doctoral students in internship and extension (cf. art. 39 para. 3 GD 681/2011) but not more than 12.

The meetings did not raise any doubts about the indicator.

Recommendations: None
The indicator is fulfilled.

According to the self-assessment document, out of the total of 2 doctoral supervisors in the field ENERGY ENGINEERING, there are no supervisors who have more than 8 doctoral students in internship and extension



(cf. art. 39 para. 3 GD 681/2011) but not more than 12.
The meetings did not raise any doubts about the indicator.

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.*

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.

- 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: Publish more papers in international journals in order to raise international visibility.

The indicator is fulfilled.

Annex II.A.29 presents in a centralized manner "International visibility of doctoral supervisors" - which operates in the doctorate field Energy Engineering.

Within the evaluated doctoral field, 2 doctoral supervisors from the total of 2 supervisors prove five publications indexed Web of Science or ERIH and 2 doctoral supervisors from the total of 2 supervisors prove at least 2 mentions that highlight the international visibility they enjoy, through the elements specified in the second part of this indicator.

Upon additional asking, more detailed information was sent about the citation of the papers. The numbers for international papers are relatively low.

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

Recommendations: None



The indicator is fulfilled.

Annex II.A.29 presents the Minimum Standards Compliance Sheets with the scientific results from the last 5 years of the doctoral supervisors in the doctoral field Energy Engineering. This indicator is met by 2 of the 2 doctoral supervisors, which means 100% of the total number of doctoral supervisors in the field.

The meetings did not raise any doubts about the indicator.

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

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

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, the number of master's degree graduates of other higher education institutions in the country or abroad who have registered for the admission competition for doctoral studies and the number of places

The meetings did not raise any doubts about the indicator.

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

Recommendations: None

The indicator is fulfilled.



According to the self-assessment document, admission to doctoral study programs is based on criteria of selection and the Methodology for organizing and conducting the competition for admission to doctoral studies, Annex II.A.4.1.

The meetings did not raise any doubts about the indicator.

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%.*

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

⁴ 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.

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

Recommendations: Analyze the reasons and define measures to solve the dropout problem

The indicator is partially fulfilled.

According to the self-assessment document, average dropout rates for the four years considered is 5/10 - percentage 0.5 exceeding the value of 0.3 - 30% percentage (50%).

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*

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, the curriculum includes at least two components dedicated to some of the transversal competencies, including aspects related to research ethics, scientometry, and academic writing.

The files of the subjects provided in the curriculum are presented in Annex II.B.2.

The advanced university training program includes relevant disciplines for training in scientific research in the doctoral field Energy Engineering namely:

1. Metodologia cercetării științifice în domeniul științe inginerești / Scientific research methodology in the field of engineering sciences
2. Etică și integritate academică în domeniul științe inginerești / Ethics and academic integrity in the field of engineering sciences
3. Gestiuinea energiei / Energy management
4. Inginerie sistemelor energetice / Energy systems engineering
5. Energii neconvenționale folosite în construcții / Unconventional energies used in construction
- 6.



Instalații eficiente în clădiri / Efficient installations in buildings

7. Tehnologii eficiente de conversie a energiei / Efficient energy conversion technologies The meetings did not raise any doubts about the indicator.

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*

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, in the evaluated doctoral field, there is the discipline Ethics and academic integrity in the field of ENGINEERING SCIENCES provided in the curriculum of the doctoral field ENERGY ENGINEERING (Anexa II.B.1.)

The meetings did not raise any doubts about the indicator.

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 activities⁵.*

- *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: None

The indicator is fulfilled.

According to the self-assessment document, the curriculum for the doctoral field INDUSTRIAL ENGINEERING has formulated the competencies that are to be ensured through the curriculum. They are divided into professional and transversal skills. At the level of the University of Oradea there is the Operational Procedure regarding the evaluation and internal monitoring of the doctoral schools/doctoral fields within IOSUD_UO (Annex II.C.2.).

The meetings did not raise any doubts about the indicator.

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*

Recommendations: Acquaint students with official procedures for solving possible problems/conflicts with supervisors.

The indicator is fulfilled.

According to the self-assessment document, each doctoral student is guided, in addition to the scientific supervisor (who has a schedule of activities and consultations made public at the doctoral school_Annex II.B.3), by a steering committee consisting of 3 other teachers, having at least the title of doctoral lecturer, specialists in the field of doctorate and thesis topic. The guiding commissions for doctoral students enrolled within the DOCTORAL SCHOOL OF ENGINEERING SCIENCES doctoral field ENERGY ENGINEERING are presented in Annex II.B.4.



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.

Although students confirm good relationship with PhD supervisors, they actually do not know official procedure if some problems arise.

The meetings did not raise any doubts about the indicator.

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*

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, at the level of the doctoral field ENERGY ENGINEERING as it is presented in the table Anexa II.B.4. For each doctoral student there is a guidance commission composed of 3 teachers researchers.

Information on the situation of the members of the guiding commissions within the doctoral field ENERGY ENGINEERING, year 2020-2021, results that the ratio between the number of students PhD students and the number of teachers researchers who provide guidance is 12:7 (1,7:1 < 3:1).

The meetings did not raise any doubts about the indicator.

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*

Recommendations: Focus research to the topics of global significance.

The indicator is partially fulfilled.

Upon additional asking, only three papers (instead of five) were provided.

The paper:

- A Fuzzy Approach for the Treatment of the Human Diseases Resulting from Exposure to Electromagnetic Fields presents aims to increase the accuracy of the EMF effects assessment on people exposed to

stabilized regime areas of power plants. The paper contains applications based on experimental data related to the assessment of the consequences of EMF exposure from one power substation. The final part of the paper presents the conclusions of the treatment and the developed applications, containing significant original contribution.



The paper:

- A few categories of electromagnetic field problems treated through Fuzzy Logic deals with the problems of fuzzy logic applied in the field of electromagnetism. The accent is on the effects of exposure to the electromagnetic field on the human body. Topic and contributions are similar to the ones of the previous paper. Thus, there is no significant contribution that can be tied up to this paper.

The paper:

- Assessment of High Voltage Equipments Operational Reliability within the Management Of Brasov SDEE gives a summary of operational reliability results carried out on high voltage equipment (HVE) that are in Brasov SDEE management. Presented data and analysis are applicable only to Brasov SDEE, thus there is no significant original contribution.

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*

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, ratio between the number of presentations of doctoral students who completed their doctoral studies in the evaluated period (last 5 years), including posters, exhibitions, made at prestigious international events (held in the country or abroad) - 9 - and the number of doctoral students who completed their doctoral studies in the evaluated period (last five years) - 3, so greater than 1.

The meetings did not raise any doubts about the indicator.

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*

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, during the period evaluated within the doctoral field Energy Engineering the number of doctoral theses allocated to a certain referent coming from a higher education institution, other than IOSUD evaluated, is not more than two, for theses coordinated by the same doctoral supervisor, in one year.

The meetings did not raise any doubts about the indicator.

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

Recommendations: Not applicable

The indicator is fulfilled/partially fulfilled/not fulfilled - Not applicable

Not applicable because the number of doctoral theses defended in the last 5 years is $5 < 10$.

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

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, within IOSUD - UO, procedures for monitoring internal quality assurance, as well as internal quality assurance policies have been developed and implemented in accordance with numerous regulations listed in the self-assessment document.

The meetings did not raise any doubts about the indicator.

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

Recommendations: it is recommended to use the feedback as the basis for needed changes and The indicator is fulfilled.

According to the self-assessment document, The Operational Procedure for the internal evaluation and monitoring of doctoral schools / doctoral fields within IOSUD_UO provides that:

- PhD students will complete the Questionnaire on the level of satisfaction with the doctoral program (Annex SEAQ_PO_CSUD_05_A.01- <https://www.uoradea.ro/display23520>), in each academic year, in the first quarter of the year;
- In the next period, the data collected from these questionnaires will be processed, so that the CSD, based on the information from these questionnaires, will present the CSUD conclusions and, as appropriate, the package of measures proposed to improve the doctoral program as a whole.

However, at the meetings students were not aware of any actions taken based on the results of the feedback. Hence, it is recommended to use the feedback as the basis for needed changes and improvements, and to communicate it to the students clearly.

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



Recommendations: None
The indicator is fulfilled.

According to the self-assessment document, within IOSUD - UO, procedures for monitoring internal quality assurance, as well as internal quality assurance policies have been developed and implemented in accordance with various regulations: The meetings did not raise any doubts about the indicator.

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

Recommendations: None
The indicator is fulfilled.

According to the self-assessment document, IOSUD –UO has and has had for the entire assessed duration of access to the services offered through the ANELIS Plus program (Annex II.C.13 - ANELIS Plus Contracts), in order to offer doctoral students free access to a platform with relevant academic databases for the fields of organized doctoral studies.

Thus, at the level of IOSUD - UO all doctoral students have access to this platform permanently, based on account and password, from anywhere, free of charge, based on their email account (prenume.numedotorand@student.uoradea.ro). Students can access the following databases: PROQUEST Central, ScienceDirect Freedom Collection, Scopus, Elsevier, de Gruyter ebooks, SpringerLink Journals, Springer, Web of Science - Core Collection, InCites Journal Citation Reports, Derwent Innovations Index, Clarivate Analytics. The meetings did not raise any doubts about the indicator.

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

Recommendations: None
The indicator is fulfilled.

According to the self-assessment document, for the prevention and control of plagiarism-related fraud at the level of IOSUD - University of Oradea, all doctoral and habilitation theses are verified by an anti-plagiarism software, which is in the list of programs recognized by CNATDCU and used at the level of higher education institutions organizing studies doctoral university and of the Romanian Academy, in order to establish the degree of similarity for scientific papers, in accordance with MENCS Order no. 3485 / 24.03.2016. - Evidence of purchase of anti-plagiarism software), respectively, (Annex II.A.19.

– Doctoral School approval-anti-plagiarism verification). Also, each doctoral student assumes the authenticity of the doctoral thesis, together with the scientific supervisor, completing the



Declaration on the authenticity of the doctoral thesis.

Each doctoral student has access, upon request and with the consent of the doctoral supervisor, to an electronic system for verifying the degree of similarity with other existing scientific or artistic creations.

The meetings did not raise any doubts about the indicator.

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

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, for the doctoral supervisors and the guiding activity, the faculties that manage the accredited doctoral field, organized within the Doctoral School of ENGINEERING SCIENCES provide two rooms with the appropriate equipment, six laboratories posted on the platform ERRIS (Annex II.A.21.) and „Mechatronics" research laboratory of OTL (www.otl.ro).

The meetings did not raise any doubts about the indicator.

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

Recommendations: Motivate students to participate more in Erasmus mobility.

The indicator is partially fulfilled.

According to the self-assessment document, at the level of the Doctoral School of Engineering Sciences there are framework agreements for the mobility of doctoral students, their list being presented in Annex II.C.14. There is also a list of three doctoral students who completed their doctoral thesis between October 1, 2015 - September 30, 2020 and who participated in international scientific conferences.

Upon additional asking the information was provided that PhD students from DD-IEN (Energy Engineering) were not in Erasmus mobility during the period (2015-2020). Also no percentages



needed as indicators were provided.

The meetings did not raise any doubts about the indicator.

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

Recommendations: Develop a network of international institutions as partners, and with foreign researchers as possible guest lecturers and with a view to possible co-tutelage

The indicator is not fulfilled.

In the self-assessment document there is no information about this indicator, i.e. it was written "It's not necessary". Upon additional asking, the following clarification was sent:

"The statement in the report refers to the fact that, during the evaluation period, no doctorates were organized in international co-supervision and respectively, no top experts were invited to give courses / lectures for doctoral students. Of course, this would be useful and we have it in mind for the future."

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

Recommendations: None

The indicator is fulfilled.

According to the self-assessment document, the University of Oradea participated through its legal representatives in the seven educational fairs to attract international doctoral students.

The meetings did not raise any doubts about the indicator.

IV. SWOT Analysis

<p>-Strengths:</p> <ul style="list-style-type: none"> - at the IOSUD level, the University of Oradea has several additional internal regulations regarding quality assurance - students are satisfied with their advisors and the PhD study in general access to scientific journals and literature in general 	<p>Weaknesses:</p> <ul style="list-style-type: none"> for some indicator there is no clear data, e.g. A.1.3.2. and A.1.3.3 weak international cooperation weak international impact of research low number of candidates low student mobility
<p>Opportunities:</p> <ul style="list-style-type: none"> stronger formalized cooperation with the industry and deeper involvement of alumni and employers in defining research plan and content of PhD study programs cooperation with companies could result in joint projects funded by the companies 	<p>Threats:</p> <ul style="list-style-type: none"> - high dropout too short deadline for finishing the Phd study

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
1.	PI	<p>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:</p> <p>a) the internal regulations of the Doctoral School;</p> <p>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;</p> <p>c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);</p> <p>d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;</p>	<p><i>The indicator is fulfilled.</i></p>	<p><i>None</i></p>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.		
2.	PI	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
3.	PI	A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.	<i>The indicator is fulfilled.</i>	<i>None</i>
4.	PI	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.	The indicator is fulfilled.	None
5.	IP	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
6.	PI *	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 /	<i>The indicator is partially fulfilled.</i>	<i>Record and analyze data relevant for this indicator</i>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		human resources development grants is not less than 20%.		
7.	PI *	A.1.3.3. 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.).	<i>The indicator is partially fulfilled.</i>	<i>Record and analyze data relevant for this indicator</i>
8.	CPI	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	<i>The indicator is fulfilled.</i>	<i>None</i>
9.	CPI	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.	<i>The indicator is partially fulfilled.</i>	<i>Motivate and support teaching staff to reach the status of doctoral supervisor</i>
10.	PI *	A.3.1.2. At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.	<i>The indicator is partially fulfilled.</i>	<i>Motivate and support teaching staff to reach the status of doctoral supervisor</i>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
11.	PI	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
12.	PI *	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 does not exceed 20%.	<i>The indicator is fulfilled.</i>	<i>None</i>
13.	CPI	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.	<i>The indicator is fulfilled.</i>	<i>Publish more papers in international journals in order to raise international visibility</i>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
14.	PI *	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	<i>The indicator is fulfilled.</i>	<i>None</i>
15.	PI *	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
16.	PI *	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
17.	PI	B.1.2.2. The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission does not exceed 30%.	<i>The indicator is partially fulfilled.</i>	<i>Analyze the reasons and define measures to solve the dropout problem.</i>
18.	PI	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.	<i>The indicator is fulfilled.</i>	<i>None</i>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
19.	PI	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
20.	PI	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
21.	PI	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.	<i>The indicator is fulfilled.</i>	<i>Acquaint students with official procedures for solving possible problems/conflicts with supervisors.</i>
22.	CPI	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
23.	CPI	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	<i>The indicator is partially fulfilled.</i>	<i>Focus research to the topics of global significance.</i>
24.	PI *	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	<i>The indicator is fulfilled.</i>	<i>None</i>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		studies within the evaluated period (past 5 years) is at least 1.		
25.	PI *	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
26.	PI *	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.	<i>Not applicable because the number of doctoral theses defended in the last 5 years is 5<10.</i>	<i>None</i>
27.	PI	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.	<i>The indicator is fulfilled.</i>	<i>None</i>
28.	PI *	C.1.1.2. Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students	<i>The indicator is fulfilled.</i>	<i>It is recommended to use the feedback as the basis for needed changes and improvements, and to</i>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<p>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.</p>		<p><i>communicate it to the students clearly</i></p>
29.	CPI	<p>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:</p> <ul style="list-style-type: none"> 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. 	<p><i>The indicator is fulfilled.</i></p>	<p><i>None</i></p>
30.	PI	<p>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.</p>	<p><i>The indicator is fulfilled.</i></p>	<p><i>None</i></p>
31.	PI	<p>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.</p>	<p><i>The indicator is fulfilled.</i></p>	<p><i>None</i></p>
32.	PI	<p>C.2.2.3. All doctoral students have access to scientific research laboratories or other</p>	<p><i>The indicator is fulfilled.</i></p>	<p><i>None</i></p>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.		
33.	PI *	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.	<i>The indicator is partially fulfilled.</i>	<i>Motivate students to participate more in Erasmus mobility</i>
34.	PI	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.	<i>The indicator is not fulfilled</i>	<i>Develop a network of international institutions as partners, and with foreign researchers as possible guest lecturers and with a view to possible co-tutelage.</i>
35.	PI	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.).	<i>The indicator is fulfilled.</i>	<i>None</i>

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

Several important issues raised during the evaluation are resumed and some general conclusions are drawn on the quality of the education provided within the doctoral study domain under review; the Experts' Panel also presents general assessments about the institution. Other general recommendation



may also be presented, which cannot be related to a specific indicator and have not been presented at point V.

A decision is proposed, together with the reasons for granting it (if the Experts' Panel members do not reach a consensus, each of them can propose and argue his/her own decision).

VII. Annexes

The following types of documents shall be attached:

- *The detailed schedule of the evaluation visit – MANDATORY.*
- *The survey questionnaire applied to doctoral students or academic staff in the doctoral study domain under review, the results - optional (e.g., in graphic form) and their interpretation - if applicable.*
- *Scanned documents – any document requested from the IOSUD during the evaluation visit and received, which is not found in the internal evaluation file received before the visit and referred to in the report.*
- *Pictures – if relevant issues are raised regarding the condition of the student residences, cafeterias, premises for teaching and learning activities, library etc.*
- *Screenshots/Print screens of the Doctoral School/IOSUD website proving specific claims in the report, accompanied by the date when they were accessed and saved.*
- *Any other documents relevant to the evaluation process referred to in the report.*

27.11.2021.

Kruno Milicevic

Signed by: Kruno Miličević