

The External Evaluation Report of a Doctoral Study Domain

Contents

- I. Introduction
- II. Methods used
- III. Analysis of performance indicators
- IV. SWOT Analysis
- V. Overview of judgments awarded and of the recommendations
- VI. Conclusions and general recommendations
- VII. Annexes

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 of the doctoral field **Electrical Engineering** at the **Politehnica University Timișoara** by Prof. Florin POPENTIU VLADICESCU (Polytechnic University of Bucharest) as a coordinator, Prof. Danijel TOPIC (J.J. Strossmayer University of Osijek, Croatia) as the international expert, and Teodora LUPU (PhD student at the Technical University of Cluj-Napoca) as a student member was performed. The period of the evaluation was from 27th of the September by the 1st of October.

General information according to Self-Assessment Document

Within the Politehnica University of Timișoara Organizing Institution of Doctoral Studies (with the abbreviation IOSUD-UPT in Romanian), in accordance with the Institutional Regulation for the organization and development of doctoral studies at the Politehnica University of Timișoara (RIODSUD-UPT), developed under Law 1/2011 and GD 681/2011, the activity of doctoral studies is carried out within a single doctoral school, **the Doctoral School of Engineering Studies**, established with the approval of RIODSUD-UPT of the UPT Senate in 2011.

The Doctoral School of Engineering Studies from IOSUD-UPT **covers 13 fields of doctoral university studies**, according to GD 778/2015, GD 376/2016, GD 140/2017, GD 158/2018, GD 326/2019 and GD 299/2020.

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



At the Doctoral School of Engineering Studies at the date of report there are 148 affiliated Ph.D. supervisors of which:

- **78 full-time Ph.D. supervisors** (professors with an employment contract for an indefinite period in IOSUD-UPT), **53 associate Ph.D. supervisors** (with a fixed term employment contract).
- A small part of the associated Ph.D. supervisors does not have a contract with IOSUD-UPT at the date of this report because they do not currently coordinate PhD students, but are professionally active.
- **61 full-time Ph.D. supervisors** who have **obtained the habilitation certificate**.

Within the doctoral field Electrical Engineering there are **8 affiliated Ph.D. supervisors** of which 5 are with an employment contract for an indefinite period. In the **last 5 years** there was **18 admitted Ph.D. students** from which 3 are women. In the same period **4 doctoral theses were defended**.

27 research centers and institutes are established and accredited internally in the Politehnica University Timișoara (http://www.upt.ro/Upt-Timisoara_centre-si-institute-decercetare-153_ro.html). They are following:

- Research Institute for Renewable Energies
- Research Center for Complex Fluid Systems Engineering
- Research Center for Materials Mechanics and Construction Safety
- Research Center in Automatic Systems Engineering
- Research Center in Intelligent Control of Energy Conversion and Storage
- Research Center for Inorganic Materials and Alternative Energies
- Research Center in Chemistry and Engineering of Macromolecular and Natural Organic Compounds
- Research Center for the Analysis and Optimization of Electric Power Systems
- Computer and Information Technology Research Center
- Research Center for Processing and Characterization of Advanced Materials
- Center for Research in Materials and Advanced Technologies
- Mechatronics and Robotics Research Center
- Research Center for Thermal Machinery and Equipment, Transport and Pollution
- Research Center in Construction Installations
- Medical Engineering Research Center
- Research Center for Advanced Methods in Study of Physical Phenomena
- Multimedia Research Center
- Urban Planning Research Center
- Research Center for Construction Rehabilitation
- Intelligent Electronic Systems Research Center
- Intelligent Signal Processing Research Center
- Engineering and Management Research Center
- Environmental Science and Engineering Research Center
- Research Center in Hydrotechnics and Environmental Protection
- Integrated Engineering Research Center
- Research Center in Infrastructures for Constructions and Transports



Within the field of Electrical Engineering, the research infrastructure can be consulted at:

<https://eeris.eu/ERIO-2000-000R-0036>

A detailed presentation of the research infrastructure can be found in Annex_A.2.1.1. in the Self-assessment sheet of the doctoral field of Electrical Engineering.

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.

For the evaluation process the following methods and tools have been used:

- The analysis of the internal evaluation report of the IOSUD 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/discussions with doctoral students in the IOSUD;
- Online meeting with representatives of the institution and of the Council for Academic Doctoral Studies (CSUD)
- Online meeting of Electrical Engineering evaluation panel with the representative and the team who drafted the internal evaluation report
- Online meeting of evaluation panel with the teaching staff of evaluated doctoral field
- Online meeting with the members of the Ethics Commission
- Online meeting with the Commission for Quality Evaluation and Assurance (CEAC) members / Quality Assurance Department
- Online meeting with the Commission for Quality Evaluation and Assurance (CEAC) members / Quality Assurance Department
- Online meeting with PhD students
- Online meeting with Electrical Engineering Domain graduates
- Online meeting with the Directors/ persons in charge of the research centers/laboratories within the doctoral study domains
- Online meeting for conclusions
- Meeting with representatives of the institution under review to discuss on the conclusions of the evaluation process and the main recommendations

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:

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. All needed documents have been provided as annexes of the self-assessment report:

- **Annex A.1.1.1.a.** – Institutional Regulation for the Organization of Doctoral Studies at the Politehnica University Timișoara, Nr. 18.874 / 16.12.2011 (Annex 10 to the UPT Charter). Available at: http://upt.ro/img/files/carta/anexe/Anexa_10_CartaUPT_Regulament_doctorat.pdf
- **Annex A.1.1.1.b-1.** – The Institutional Regulation for Organizing the Elections for the Organizational Structures and Management Functions of the Doctoral Studies at IOSUD-UPT Level, approved by HS 13 / 10.05.2012, for the legislature 2012-2016. Available at: http://www.upt.ro/administrare/dgac1/file/2011-2012/regulamente/IOSUD-UPT_CSUD2012.pdf
- **Annex A.1.1.1.b-2.** – The elections at the level of CSUD / CSD in the legislature 2012-2016. Available at: http://www.upt.ro/Informatii_alegeri-consiliu-csud_299_en.html
- **Annex A.1.1.1.b-3.** – The decision on the appointment of CSUD members in 2012-2016. Available: http://www.upt.ro/administrare/dgac1/file/2011-2012/doctorat/alegeri_csud/Numire_membri_CSUD_22_06_2012.pdf
- **Annex A.1.1.1.b-4.** – The elections for the CSUD director for the 2012-2016 legislature. Available: http://www.upt.ro/Informatii_concurs-public---director-al-csud_298_en.html
- **Annex A.1.1.1.b-5.** – The decision to appoint the director of CSUD in 2012-2016
- **Annex A.1.1.1.b-6.** – The decision to appoint the director of CSD in 2012-2017 Available: http://www.upt.ro/img/files/2017-2018/doctorat/Decizie_numire_DSD_Andreescu_Gh-Daniel.pdf
- **Annex A.1.1.1.b-7.** – The regulation for organizing the processes for establishing the managing structures and for electing / designating competition regarding the management positions at the Politehnica University Timisoara for the 2016-2020 legislature. Available at: http://www.upt.ro/img/files/hs/HS_207_26.11.2015_Regulament_alegeri.pdf

- **Annex_A.1.1.1.b-8.** – Organizing the elections for CSUD / CSD members for the 2016-2020 legislature. Available at: http://www.upt.ro/Informatii_alegeria-membrilor-csud-si-csd-pentru-mandatul-2016-2020_840_en.html
- **Annex_A.1.1.1.b-9.** – The report of the electoral commission on the appointment of CSUD members in 2016-2020. Available: http://www.upt.ro/img/files/alegeri_2016/mcsud_mcsd/Raport_comisie_electorala_CSUD_CSD.pdf
- **Annex_A.1.1.1.b-10.** – The decision to appoint the director of CSUD in 2016-2020. Available: http://www.upt.ro/img/files/alegeri_2016/csud/Decizie_numire_director_CSUD_2016.pdf
- **Annex_A.1.1.1.b-11.** – The decision to appoint the director of CSD in 2017-2022. Available: http://www.upt.ro/img/files/2017-2018/doctorat/Decizie_numire_DSD_Dorin_Lelea.pdf
- **Annex_A.1.1.1.b-12.** – The regulation for organizing the processes for establishing the managing structures and for electing / designating competition regarding the management positions at the Politehnica University Timisoara for the 2020-2024 legislature. Available: http://upt.ro/img/files/carta/anexe/Anexa23_CartaUPT_Regulament_alegeri-2020.pdf
- **Annex_A.1.1.1.b-13.** – The proof of the competition for CSUD director in the 2020-2024 legislature. Available: http://www.upt.ro/Informatii_concurs-pentru-ocuparea-functiei-de-director-al-csud-pentru-1533_en.html
- **Annex_A.1.1.1.b-14.** – The decision to appoint director of CSUD. Available: http://www.upt.ro/img/files/csud/Decizie_numire_director_CSUD_2020.pdf
- **Annex_A.1.1.1.b-15.** – Election of the student representative in the CSD. Available: http://www.upt.ro/img/files/alegeri_2016/mcsud_mcsd/PV_CSD_drd.pdf
- **Annex_A.1.1.1.b-16.** – Election of the student representative in the CSUD. Available: http://www.upt.ro/img/files/alegeri_2016/mcsud_mcsd/PV_CSUD_drd.pdf
- **Annex_A.1.1.1.b-17.** – By HS no. 38 / 21.01.2021, the mandate of CSUD / CSD members was extended until 17.07.2021. Available: http://www.upt.ro/img/files/hs/2021/21.01.2021/HS_38_21.01.2021_Prelungire-mandat-membri-CSUD-si-CSD.pdf
- **Annex_A.1.1.1.c-1.** – The institutional procedure regarding the organization of the admission to doctoral studies in UPT session 2019, approved by HCAUPT no. 54 / 11.06.2. Available: http://www.upt.ro/img/files/2018-2019/admitere/doctorat/IOSUD-UPT-admitere-2019_procedura.pdf
- **Annex_A.1.1.1.c-2.** – The Institutional Procedure for organizing the admission to Doctoral Studies at the Politehnica University Timișoara, 2018 session, approved by HCA no. 18 / 24.04.2018. Available: http://www.upt.ro/img/files/2017-2018/admitere/doctorat/IOSUD-UPT-admitere-2018_PROCEDURA_ANEXE.pdf
- **Annex_A.1.1.1.c-3.** – The Institutional Procedure for organizing the admission to Doctoral Studies at the Politehnica University Timișoara, the 2017 session approved by HCA no. 31 / 16.05.2017. Available: http://www.upt.ro/img/files/2016-2017/admitere/doctorat/IOSUD-UPT-admitere-2017_PROCEDURA_ANEXE.pdf
- **Annex_A.1.1.1.c-4.** – The Institutional Procedure for organizing the admission to Doctoral Studies at the Politehnica University Timișoara - September 2016 approved by HCA no. 37 / 30.06.2015. Available: http://www.upt.ro/img/files/2015-2016/admitere/doctorat/Procedura_admitere_doctorat_2015-2016.pdf
- **Annex_A.1.1.1.c-5.** – The Institutional Procedure for organizing the admission to Doctoral Studies at the Politehnica University Timișoara - September 2015 approved by HCA no. 37 /

30.06.2015. Available: http://www.upt.ro/img/files/2014-2015/admitere/doctorat/Proctuctura_admitere_doctorat_2015.pdf

- **Annex_A.1.1.1.c-6.** – The procedure for public defense of the doctoral thesis and set up the doctoral file of the Ph.D. student in IOSUD-UPT. Available: http://www.upt.ro/img/files/2015-2016/doctorat/Procedura_sustinere_teza_incepand_cu_04-2016.pdf
- **Annex_A.1.1.1.c-7.** – The procedure for the completion of doctoral studies and the public defense of the doctoral thesis in UPT, adopted by HCA 5 / 15.01.2019. Available: http://upt.ro/img/files/2019-2020/doctorat/HCA_5_din_2019_Instructiune_de_lucru_sustinere_teze_doctorat.pdf
- **Annex_A.1.1.1.c-8.** – Procedure for online defense of doctoral theses in UPT is established for academic year 2019-2020. Available: http://www.upt.ro/img/files/hs/2020/14.05.2020/HS_111_14.05.2020_Procedura-sustinere-online-teze-doctorat.pdf
- **Annex_A.1.1.1.c-9.** – Through HS 231 / 17.09.2020 (Annex_A.1.1.1.c-9.) the validity of the Procedure for the online defense of doctoral theses in UPT for the academic year 2020-2021 has been extended.
- **Annex_A.1.1.1.d.** – Recognition Certificates issued by IOSUD-UPT are presented for doctoral diplomas recognized by IOSUD-UPT.
- **Annex_A.1.1.1.e-1.** – The UPT management structure
- **Annex_A.1.1.1.e-2.** – The CSUD/CSD structure.
- **Annex_A.1.1.1.f-1., Annex_A.1.1.1.f-2., Annex_A.1.1.1.f-3., Annex_A.1.1.1.f-4., Annex_A.1.1.1.f-5.** – The versions of the Contract used in the period 2019 - 2015
- **Annex_A.1.1.1.g-1.** – Procedure for analysis and approval of proposals on the subject of the training program based on advanced university studies.
- **Annex_A.1.1.1.g-1.** – The decision that approves the plans for individual training based on advanced university studies for the current academic year

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:

The indicator is fulfilled

According to art.17, par. 5 of GD of the single doctoral school within IOSUD-UPT (681/2011 The regulation) – (Annex_A.1.1.1.a.) establishes mandatory criteria, procedures and standards regarding the following aspects:

- acceptance of new doctoral coordinators, as well as the regulations regarding the method by that a doctoral coordinator may be revoked as a member of the doctoral school (Art. 16, 17);
- the mechanisms through which decisions are taken regarding the opportunity, structure and content of the training program based on advanced university studies (Art. 55-67);



- the procedures for changing the doctoral coordinator of a certain doctoral student and the procedures for mediating the conflicts (Art. 15, 25);
- the conditions under which the doctoral program may be interrupted (Art. 47, 48);
- ways to prevent fraud in scientific research, including plagiarism (Art. 77, 79, 85);
- ensuring access to research resources; (Art. 68-72)
- the attendance obligations of doctoral students (Art. 41, 53).

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:

The indicator is fulfilled.

The computer system for the record of doctoral students and the academic career used in the IOSUD-UPT comprises mainly:

- The ENROLL admission platform (intended for the management of the information on the admission of students, which is being expanded for doctoral studies for monitoring the activity of doctoral students and setting up the doctoral file in electronic format).
- Starting with the academic year 2017/2018 in IOSUD - UPT, the admission process to doctoral studies is computerized, by accessing by the candidates the ENROLL platform, at the address: <http://admitere.upt.ro/phd/>
- Starting with the academic year 2020/2021, IOSUD - UPT created the possibility for students to have the entire admission file created and submitted on the ENROLL platform.
- Instructions for completing the admission file in the ENROLL platform are presented in Annex_A.1.2.1-1.

In **Annex A.1.2.1-2.**, examples of database usage are presented - List of doctors in the period 2016-2020 in the field of Electrical Engineering.

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:

The indicator is fulfilled.



IOSUD-UPT performed the verification of the similarity percentage in the doctoral theses elaborated starting with 2016, using the following computer programs, approved by MENCS acc. OM 3485/2016.

- *Plagiat.pl*, through the computer platform doct.edu.ro/doct of the Ministry of Education, between June 2016 and July 2017.
- *SemPlag*, through the platform uefiscdidirect.ro/semplag/index.php, between August 2017 and September 2017.
- *iThenticate* (purchased by UPT), October 2017 - present.
- In **Annex_A.1.2.2-1.**, there is a list of PhD students in the field of Electrical Engineering for which computer programs were used to verify the percentage of similarity.
In **Annex_A.1.2.2-2.**, examples of using the similarity software for PhD students in the field of Electrical Engineering.

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:

The indicator is fulfilled.

List of grants for the field of Electrical Engineering:

- The doctoral coordinators from the field of Electrical Engineering participated, in the reference period, in implementation of grants presented in **Annex_A.1.3.1**. The involvement was both in research and in institutional grants.
- At the time of submitting the evaluation file, the situation of research grants is as follows:
 - Research or institutional development grants / human resources in implementation: 1
 - Research or institutional development grants / human resources obtained by doctoral coordinators in the last 5 years: 1
 - Total contracts in the referenced field (2016-2020): 3.

Research grants address relevant issues for the analyzed doctoral field and, the doctoral students have been engaged in the research projects, according to the legislation in force (**Annex_A.1.3.2-3.**).

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:

The indicator is fulfilled.

In the frame of the quality indicator, IOSUD-UPT used and is still using, the following financial resources from its own incomes to support doctoral students, in order to carry out doctoral study programs:

- UPT doctoral scholarships from own income, granted for 2018 based on HCA no. 44 / 11.09.2018 and for 2019 based on HCA 73 / 24.09.2019 (**Annex_A.1.3.2-1.**)
- Doctoral grants from UPT's own revenues intended to complete doctoral studies, granted based on the Decision of the UPT Senate or the Board of Directors of the UPT (**Annex_A.1.3.2-2.**). In the case of scholarships for the extension of doctoral studies, only those doctoral students who benefit from funding at the time of evaluating the doctoral field were taken into account. • Engaging the doctoral students in research grants according to the legislation in force (**Annex_A_1.3.2-3.**).
- In **Annex_A.1.3.2.**, the list of PhD students in the field is presented for Electrical Engineering, with the explicit fulfilled Pag. 16 / 59 specification of the Ph.D. students additionally financed from UPT's own revenues.
- Existing doctoral students at the time of evaluation: 17
- Doctoral students existing at the time of evaluation who benefit from sources of funding other than government funding: 9

$9/17 * 100 = 52.94 \%$ - CRITERION FULFILLED $\geq 20\%$

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

Recommendations:

The indicator is fulfilled.

The data related to the application of the indicator are given in **Annex_A.1.3.3.** In summary, according to the annex:

$S1 / S2 * 100 = 18.62\%$ CRITERION FULFILLED $\geq 10\%$

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.



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:

The indicator is fulfilled.

The spaces and infrastructure of IOSUD / Doctoral School allow the implementation of research activities in the evaluated field, in accordance with the mission and objectives assumed (computers, specific software, equipment, laboratory equipment, library, access to international databases, etc.).

- The Central Library of UPT offers access to information resources both traditionally and electronically. The library has the following types of information resources: monographs, periodical publications, electronic resources with local access and remote access. They are 45% free on the book-shelf and 55% in book and magazine stores.
- The library has an area of 8400 m², 6 levels, 750 reading places, Reading room 24 h access with 100 seats, Group study rooms, Conference room, Multimedia rooms, IT spaces, Individual study rooms as well as spaces for relaxation.
- The accesses to the databases subscribed within the Anelis Consortium (later Anelis Plus) during May-October 2018 are:
 - 1. IP: 48,321 accesses;
 - 2. Mobile access: 390,281 accesses.
- Within the field of Electrical Engineering, the research equipment of can be found on the ERRIS platform, accessing the link: <https://eeris.eu/ERIO-2000-000R-0036>

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:

The indicator is fulfilled.

Within the field of Electrical Engineering, 8 doctoral coordinators are affiliated to IOSUD - UPT. All of them meet the minimum CNATDCU criteria imposed by OMEN 6129/2016.

Name and surname	Minimum conditions CNATDCU (total) (Score)	Completed for the entire activity (Score)	Meets CNATDCU standards
Academician Ion BOLDEA	600	16600	YES
Prof.dr.ing. Marius BIRIESCU	600	1248,66	YES
Prof.dr.ing. Sorin Ioan DEACONU	600	7692,87	YES
Prof.dr.ing. Nicolae MUNTEAN	600	2838	YES
Prof.dr.ing. Sorin MUȘUROI	600	1906	YES
Prof.dr.ing. Manuela PĂNOIU	600	2628,41	YES
Prof.dr.ing. Dumitru TOADER	600	3117,45	YES
Prof.dr.ing. Lucian TUTELEA	600	3138.78	YES

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:

The indicator is fulfilled.



Within the field of Electrical Engineering, 8 doctoral coordinators are affiliated to IOSUD-UPT. 5 of them are tenured professors within IOSUD UPT (Annex_A.3.1.2.).

No.	Name, Surname	Order of Minister by which they were conferred the quality of doctoral coordinator	STATUTE
1	BIRIESCU Marius-Livius	5679/19.11.2010	CDFC
2	BOLDEA Ion-Gheorghe	4794/16.04.1993	CDFC
3	DEACONU Sorin-Ioan	4100/28.05.2019	CDT
4	MUNTEAN Nicolae	4697/14.08.2009	CDT
5	MUȘUROI Sorin	4209/10.06.2015	CDT
6	TUTELEA Lucian Nicolae	4718/11.08.2015	CDT
7	TOADER Dumitru	4697/14.08.2009	CDA
8	PĂNOIU Manuela	3983/07.06.2016	CDT

CDT - doctoral coordinator - contract for an indefinite period

CDA - associate doctoral coordinator

CDFC - doctoral coordinator without contract

8 doctoral coordinators in total

$$5/8 * 100 = 62.5\% \text{ tenured professors}$$

- CRITERION FULFILLED $\geq 50\%$

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

Recommendations:

The indicator is fulfilled.

The training program based on advanced university studies includes the following types of courses:

- **CROSS-CURRICULAR COURSE:** is sustained for all doctoral students of the 1st year. In the period 2008-2017 the course title was: "Scientific research, communication and deontology". The subject content is public and can be found at: http://www.upt.ro/Informatii_cscs_419_ro.html. Starting with 2018, the cross-curricular course is named "Ethics and academic integrity in scientific research and dissemination of results" The subject content is public and can be accessed at: http://www.upt.ro/Informatii_etica-si-integritate-academica-in_cercetarea-stiintifica-si_1409_en.html The course has the following structure:

- 7 course lessons - subject tenure: Prof.univ.dr.ing. Toma Leonida Dragomir,

- 7 conferences - given by professors, all scientific recognized experts: Prof.univ.dr.ing. Radu VasIU, Prof.univ.dr.ing. Ștefan Preitl, Prof.univ.dr.ing. Radu Marinescu, Prof.univ.dr.ing. Ștefan Holban, Acad.prof.univ.dr.ing. Ion Boldea, Prof.univ.dr.ing. Romeo Susan Resiga, Acad.prof.univ.dr.ing. Dan Dubină
- 7 seminars - held by 6 professors, all scientific recognized experts: Prof.univ.dr.ing. Daniel Andreescu, Prof.univ.dr.ing. Liviu Marșavina, Prof.univ.dr.ing. Nicolae Vasilcsin, Prof.univ.dr.ing. Ștefan Preitl, Prof.univ.dr.ing. Dinu Florea, Prof.univ.dr.ing. Dorin Lelea.
- Starting with 2020/2021, the activities related to the course "Ethics and academic integrity in scientific research and dissemination of results" are held in the frame of Virtual Campus platform of the Politehnica University Timișoara.
- **MASTER degree courses**, which were not previously attended by the doctoral student.
- **TUTORIAL courses**: in the subject of doctoral research (based on individual study program proposed and coordinated by the doctoral coordinator). For all courses within the training program based on advanced university studies, the courses are sustained by professors or researchers who have the level of doctoral coordinator / holders of habilitation degree, professor / CS I or associate professor / CS II with proven expertise in the field of taught subjects. In Annex_A.3.1.3., the courses of the training program based on advanced university studies and their tenures are exemplified (which constitute Annex 1 to the doctoral study contract for each doctoral student).

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:

The indicator is fulfilled.

The list of doctoral coordinators and the number of doctoral students coordinated at the date of this report, is included in **Annex_A.3.1.4.** Out of the total of 8 doctoral coordinators in the field of Electrical Engineering, 0 (zero) doctoral coordinators supervise at the same time more than 8 doctoral students, but not more than 12, during their doctoral studies (3 or 4 years, depending on the doctoral field, to which are added the legally granted extension periods). Therefore, the percentage is:

$$(0/8)*100 = 0 \% \rightarrow \text{CRITERION FULFILLED} \leq 20\%.$$

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.*

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.



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

Recommendations:

The indicator is fulfilled.

From the 8 doctoral coordinators from the field of Electrical Engineering, all of them fulfilled this criterion.

$$8/8*100=100 \%$$

CRITERION FULFILLED \geq 50%

Details are presented in **Annex 3.2.1.**

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:

The indicator is fulfilled.

All of the 8 Coordinators achieved at least 25% of the score required by the minimum CNATDCU standards in force at the date of evaluation based on scientific results within the last 5 years.

No.	Last name, First name	Percentage achieved (2016 - 2020)	At least 25% in the last 5 years of the minimum score of standard
1	Acad. Ion BOLDEA	2756 / 600 = 459.33 %	YES
2	Prof.dr.ing. Marius BIRIESCU	298,77 / 600 =49.79 %	YES
3	Prof.dr.ing. Sorin Ioan DEACONU	4304,84 / 600 = 717.47 %	YES
4	Prof.dr.ing. Nicolae MUNTEAN	1365/600 = 227.5 %	YES
5	Prof.dr.ing. Sorin MUȘUROI	588 / 600 = 98 %	YES
6	Prof.dr.ing. Manuela PĂNOIU	1085,07 / 600 = 180.84 %	YES
7	Prof.dr.ing. Dumitru TOADER	1193,27 / 600 = 198.87 %	YES
8	Prof.dr.ing. Lucian TUTELEA	542.48 / 600 = 90.41 %	YES

(8/8) *100 = 100%

CRITERION FULFILLED \geq 50%

Deatils are presented in **Annex 3.2.2.**

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:

The indicator is partially fulfilled.



The ratio between M.Sc. graduates from educational institutions other than IOSUD - UPT, enrolled for doctoral admission (last 5 years) and the number of positions financed from the state budget - field of Electrical Engineering is summarized in the following table:

Academic Year	Candidates enrolled (M.Sc. graduates from other universities) (1)	State budget positions (2)	Total number of candidates (3)
2019/2020	0	4	4
2018/2019	0	1	1
2017/2018	0	5	4
2016/2017	1	4	6
2015/2016	0	4	4
TOTAL	1	18	19
Ratio: (1)/(2)	0.06		
Ratio: (3)/(2)			1.06

Details are presented in **Annex_B.1.1.1-1., Annex_B.1.1.1-2. And Annex_B.1.1.1-3.**

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:

The indicator is fulfilled.

Admission to doctoral studies in IOSUD-UPT is regulated by the Institutional Procedure regarding the organization of admission to doctoral studies in IOSUD-UPT, updated annually with legislative acts. Procedure is described in the **Annex_B.1.2.1.**

For the admission starting with the academic year 2019/2020, the information is public at:

http://www.upt.ro/Informatii_arhiva---admitere-doctorat-2019_1418_en.html



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*

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

Recommendations:

The indicator is fulfilled.

The list of doctoral students admitted and enrolled for doctoral studies in IOSUD-UPT, for the admission sessions 2015, 2016, 2017, 2018, 2019 who were expelled in the first 3 years of the doctoral program is presented in **Annex_B.1.2.2.**, for the doctoral field of Electrical Engineering.

Total enrolled (2015-2019): 18
Expelled in the first 3 years: 0
Abandonment rate = $(0/18) \cdot 100 = 0\%$
CRITERION FULFILLED $\leq 30\%$

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:

The indicator is fulfilled.

The individual plan for the training of the doctoral student through advanced university studies, representing Annex 1 to the Contract of doctoral studies, contains three courses relevant for the scientific research training of the doctoral student. According to the UPT regulations (footnote 1 of the annex):

"The individual plan will include the following types of courses:

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.



- i. cross-curricular course, organized by the Doctoral School (SD);
- ii. tutorial course on doctoral research topic (based on individual study program proposed and mentored, by the doctoral coordinator);
- iii. MSc course (that was not previously attended by the doctoral student).

The cross-curricular course is mandatory. The other two courses can be of choice of type ii) or iii).

The cross-curricular course (related to all doctoral students in the first year), adopted in UPT, is a discipline related to the research methodology and deontology of the scientific researcher, a discipline that in the period 2008-2018 was entitled Scientific research, communication and deontology, and starting with the year 2018 is entitled Ethics and academic integrity in scientific research and dissemination of results. The subject content file is public and can be found at the addresses:

- http://www.upt.ro/Informatii_cscs_419_ro.html (2008-2017) and
- http://www.upt.ro/Informatii_etica-si-integritate-academica-in-cercetarea-scientific-and-_1409_en.html (present).

Within the course there are 7 lectures, 7 conferences (by different lecturers, all scientific recognized experts) and 7 seminars (by 6 distinct lecturers, all scientific recognized experts). This discipline (course) is intended for the in-depth study of the research methodology, being developed competencies and skills related to the research methodology.

The second and third disciplines in the plan are chosen by the doctoral coordinator so as to contribute to the deepening of the field and the doctoral topic. In Annex_B.2.1.1-1., individual doctoral training plans are presented for the evaluated doctoral field. The evidence of the results, obtained for the courses from the individual training plan, is kept at the UPT Doctoral School in examination minutes, summarized in Annex 2 of the Contract of the doctoral studies (Annex_B.2.1.1-2.)

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:

The indicator is fulfilled.

The individual plan for the training of the doctoral student through advanced university studies, representing Annex 1 to the Contract of doctoral studies, contains three courses relevant for the scientific research training of the doctoral student.

The subject content file is public and can be found at the addresses:

- http://www.upt.ro/Informatii_cscs_419_ro.html (for the period 2008-2017) and



- http://www.upt.ro/Informatii_etica-si-integritate-academicain-cercetarea-scientific-and-1409_en.html (present).

Deatails are presented in **Annex_B.2.1.1-1** and **Annex_B.2.1.1-2**.

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:

The indicator is fulfilled.

For the courses from MSc programs, recommended to the doctoral student by the doctoral coordinator, the competencies, skills and abilities developed, can be found in the course file, cf. **Annex_B.2.1.3-2**.

The completion of the courses from the training program based on advanced university studies or doctoral research activities aims at acquiring the competencies and abilities related to level 8 of qualifications, according to the National Qualifications Framework (CNC). Consequently, IOSUD-UPT applies a procedure for verifying the fulfillment of the exigencies of the doctoral university studies (**Annex_B.2.1.3**).

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:

The indicator is fulfilled.

In **Annex_B.2.1.4**, are presented the documents related to proposal for the advising commission members and minutes supporting the doctoral research project and research reports of the doctoral students in the field of Electrical Engineering.

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.*

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.



- 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:

The indicator is fulfilled.

In Annex_B.2.1.5. the doctoral students existing at the time of the evaluation and the composition of the advising commissions are presented for the field of Electrical Engineering.

Nr. doctoral students (PhD): 17

Nr. professors in advising commissions (CD): 26

Ratio Drd/CD: 0.65

→**CRITERION FULFILLED ≤ 3: 1**

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:

The indicator is fulfilled.

Number of doctoral students who obtained the doctoral degree in the period 2016-2020 is 4

Relevant papers are available in **Annex_B.3.1.1**

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:



The indicator is fulfilled.

Number of doctoral students who obtained the doctoral degree in the period 2016-2020: **4**

Number of articles presented at conferences: **12**

Each doctoral student has at least one paper presented at prestigious international events, the details can be found in **Annex_B.3.1.2**.

List of students who obtained the title of doctor in the period 2016-2020 and the number of participations in conferences – field of Electrical Engineering.

$$12/4 = 3$$

CRITERION FULFILLED ≥ 1

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:

The indicator is fulfilled.

For the field of Electrical Engineering, in the period 2016-2020, THERE WERE NO cases in which the same expert was part of more than two doctoral commissions for the public defense of theses coordinated by the same doctoral coordinator in the same year, as follows:

- 2016: 2 these defended.
- 2017: 1 thesis defended.
- 2018: No thesis defended.
- 2019: No thesis defended.
- 2020: 1 thesis defended.

List of students who defended their doctoral theses in the period 2016-2020 and the commissions of scientific experts - the field of Electrical Engineering are presented in **Annex_B.3.2.1**.

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:

The indicator is fulfilled.

For the field of Electrical Engineering, in the period 2016-2020, **4 doctoral theses were defended**. According to the specifications of indicator B.3.2.2 only those doctoral fields are analyzed in which at least ten doctoral theses have been defended in the last five years.

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:

The indicator is fulfilled.

C.1.1.1.-a

The reports are used to monitor and evaluate the results and performances of teaching and research activities, both in terms of meeting the minimum standards developed / approved based on art. 303 para. (4) of LEN 1/2011, acc. HS no. 135 / 17.04.2014 as well as the fulfillment of OMENCŞ no. 6129/2016, regarding the approval of the minimum necessary and obligatory standards for granting the



didactic titles in higher education, of the professional degrees of research development, of the quality of doctoral coordinator and of the habilitation degree.

Details in **Annex_C.1.1.1-a**.

C.1.1.1.-b

- **"UPT's strategic development plan for the period 2016-2020"** considered the continuation of activities and the development of mechanisms to support research excellence in the university. In order to achieve these goals, the constant development of UPT's research infrastructure at the level of international standards, is necessary.
- UPT's research activity is mainly carried out in the frame of 25 UPT research centers. Their research infrastructure is highlighted on the ERRIS platform, at the following link: <https://eeris.eu/ERIO-2000-000R-0036>
- Among the most important research infrastructures in UPT we can emphasize the **Research Institute for Renewable Energies - ICER**. It was funded by the POSCCE operational program, priority axis 2 "Competitiveness through Research, Technological Development and Innovation", in a period 2009–2014. The total value of the project was 66 882 357 lei. 18 new research laboratories were created and 5 were modernized, 120 equipments were purchased, 12 of them with a value of over 100,000 EUR. Many of the existing high-performance equipment at ICER are unique within the Timisoara University Center. These are used for research grants in interdisciplinary fields proceeding in UPT: Complex projects, PED, Bridge, H2020, cross-border projects, etc.
- Another research center of UPT with a remarkable infrastructure is the **Research Center for Materials Mechanics and Structural Safety (CEMSIG)**, established in 1999. The research areas emphasis on cold formed metal structures and the performance of metal and composite structures under seismic actions, fire and other natural and human hazards, as well as on high-performance materials for metal structures located in seismic regions. Through a POSCCE-contract ACTEX, CEMSIG benefited from research infrastructure worth 21 000 000 lei.
- The development of UPT's research infrastructure is achieved through research and development contracts carried out in the university, obtained through national and international competitions, but also through UPT's internal research grants, organized in recent years and financed from UPT's own revenues and oriented to young researchers

C.1.1.1.-c

- The procedure for admission to doctoral studies is updated periodically, in accordance with the modifications of national legislation. For the academic year 2019-2020, the procedure can be found at: http://www.upt.ro/img/files/2018-2019/admitere/doctorat/IOSUD-UPTadmitere-2019_procedura.pdf
- The contract for doctoral studies is updated annually. The documents related to doctoral students enrolled in the period 2015-2019 can be found publicly at: http://www.upt.ro/Informatii_documentele-doctoranzilor-inmatriculatiin-perioada-2005-201_289_en.html

C.1.1.1.-d

- According to the internal regulations of IOSUD - UPT, the minimum criterion for defending the doctoral thesis is the publication of 2 scientific papers indexed in the WOS database. This aspect is regulated in the Contract for doctoral studies, by art. 16.



- Also, the scientific activity of doctoral students is monitored by the advising commissions during the doctoral study.
- At the same time, within IOSUD-UPT, during the reporting period, the program to support doctoral students for the publication of papers in WOS indexed journals as well as the participation at conferences with WOS indexed procedures, was carried out. Details can be found at: http://www.upt.ro/international/Mobilitati-Si-CooperariInternationale_Programul-de-finantare-ISI_27_ro.html

C.1.1.1.-e

The training program based on advanced university studies includes the following types of courses:

- **CROSS-CURRICULAR COURSE:** is sustained for all doctoral students of the 1st year
- **MASTER degree courses**, which were not previously attended by the doctoral student.
- **TUTORIAL courses:** in the subject of doctoral research (based on individual study program proposed and coordinated by the doctoral coordinator).

In **Annex_A.3.1.3.**, the courses of the training program based on advanced university studies and their tenures are exemplified (which constitute Annex 1 to the doctoral study contract for each doctoral student).

C.1.1.1.-f

Within IOSUD-UPT, the Career Counseling and Guidance Center operates as a structure of the Politehnica University Timișoara (UPT) with the mission to offer the best possible information, professional orientation and social integration of students:

<https://www.cicoc.upt.ro/>

<https://www.facebook.com/CCOC.UPT>

Also, within the cross-curricular course of “Ethics and academic integrity in scientific research and dissemination of results”, lectures and seminars are organized in order to advise the doctoral students in participation at scientific events and the publication of articles in specialized journals:

http://www.upt.ro/img/files/2020-2021/doctorat/EIACSDR/210421_Fisa_disciplinei_EIACSDR-2020-2021.pdf

At the same time IOSUD-UPT financially supports the participation of doctoral students in scientific events and publication of scientific papers in WOS indexed journals:

http://www.upt.ro/international/Mobilitati-Si-CooperariInternationale_Programul-de-finantare-ISI_27_en.html

In 2018 within IOSUD-UPT, a scholarship program was developed for doctoral students participating in prestigious international conferences organized by UPT:

http://www.upt.ro/international/Mobilitati-Si-CooperariInternationale_Burse-pentru-doctoranzi-care-participate-in-conferencesorganized-by-UPT_126_en.html

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:

The indicator is fulfilled.

The students have been periodically interviewed:

- Regarding level of the satisfaction of the advanced university training program (**Annex_C.1.1.2-1.**)
- Regarding level of the satisfaction with scientific resprogram (**Annex_C.1.1.2-2.**)
- Set of the anonymous questionnaires from doctoral students is presented in (**Annex_C.1.1.2-3.**)
- Measures for the improvement of the general satisfaction of students with doctoral studies are established (**Annex_C.1.1.2-4.**)

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:

The indicator is fulfilled.

C.2.1.-a. the IOSUD/Doctoral School regulation

The regulation of the doctoral school is part of the "Institutional Regulation for the Organization of the Doctoral Studies at the Politehnica University Timișoara",



http://www.upt.ro/administrare/dgac1/file/2011-2012/regulamente/Anexa_10_CartaUPT_Regulament_doctorat.pdf

C.2.1.-b the admission regulation

The procedure is updated annually, in order to bring it in line with the legislative changes at the national level, respectively with the number and distribution of doctoral positions by doctoral fields:

http://www.upt.ro/img/files/2019-2020/admitere/doctorat/HS_156_11-06-2020-IOSUD-UPT-admitere-2020_PROCEDURA_anexe.pdf

The procedures regarding the organization of the admission to doctoral studies in IOSUD-UPT for the period 2015 - 2019 is presented in the self-assessment report.

C.2.1.-c the doctoral studies contract

The doctoral study contracts are available online. For the academic year 2019/2020. Can be found on the following links:

- scholarship: http://www.upt.ro/img/files/2019-2020/doctorat/Contract_Studii_Doctorale_bursa_2019.pdf
- scholarship based on UPT own income: http://www.upt.ro/img/files/2019-2020/PhD/Contract_Studii_Doctorale_bursa_venituri_proprii_2019.pdf
- scholarship UPT+: http://www.upt.ro/img/files/2019-2020/doctorat/Contract_Studii_Doctorale_bursa_UPT_si_venituri_proprii_2019.pdf
- without scholarship: http://www.upt.ro/img/files/2019-2020/doctorat/Contract_Studii_Doctorale_fara_bursa_2019.pdf
- fee: http://www.upt.ro/img/files/2019-2020/doctorat/Contract_Studii_Doctorale_taxa_frecventa_redusa_2019.pdf

Contracts are available also and for the following academic years: 201./2019, 2017/2018, 2016/2017 I 2015/2016.

C.2.1.-d the study completion regulation including the procedure for the public presentation of the thesis

The regulation for completion of the doctoral studies is detailed in "Procedure for completion the doctoral studies and public defense of doctoral theses in UPT",

http://www.upt.ro/img/files/2018-2019/doctorat/HCA_nr71_06-2018_Instructiune_de_lucru_sustinere_publica.pdf

The procedure for public defense of the doctoral thesis and the set up the doctoral file, used since 2016, is available at http://www.upt.ro/img/files/2015-2016/doctorat/Proeductura_sceperete.pdf

The procedure for completion the doctoral studies and public defense of the thesis HCA 5 / 15.01.2019 is publicly available at: http://upt.ro/img/files/2019-2020/doctorat/HCA_5_din_2019_Instructiune_de_lucru_sustinere_teze_doctorat.pdf



In the current epidemiological context, for the online defense of doctoral theses, the “Procedure for online defense of doctoral theses in UPT is established for academic year 2019-2020” (HS no.111/14.05.2020),- publicly available at:

http://www.upt.ro/img/files/hs/2020/14.05.2020/HS_111_14.05.2020_Procuctura-sustinere-online-teze-doctorat.pdf

Through HS 231 / 17.09.2020 the validity of the Procedure for the online defense of doctoral theses in UPT for the academic year 2020-2021 has been extended. Ppublicly available at:

http://upt.ro/img/files/2019-2020/doctorat/HS_231_17-09-2020_Prelungire_valabilitate_proced_sustinere_online_teze_doctorat.pdf

C.2.1.-e the content of the training study program based on advanced academic studies

The information regarding the cross-curricular discipline, mandatory for all doctoral students, based on the advanced university training (first year of the doctoral studies program) is available at:

- academic year 2017-2018: http://www.upt.ro/Informatii_cscs_419_ro.html,
- academic year 2018-2019: http://www.upt.ro/Informatii_eiacsdr_1075_ro.html,
- academic year 2019-2020: http://www.upt.ro/Informatii_eiacsdr-2019-2020_1682_ro.html

C.2.1.-f the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data

The offer of doctoral coordinators is updated annually and used in the admission process for doctoral studies:

- Admission 2019: http://www.upt.ro/img/files/2018-2019/admitere/doctorat/Oferta_conducatori_de_doctorat_2019.pdf
- Admission 2018: http://www.upt.ro/img/files/2017-2018/admitere/doctorat/Oferte_conducatori_doctorat-2018.pdf
- Admission 2017: http://www.upt.ro/img/files/2016-2017/admitere/doctorat/oferte/Oferte_conducatori_doctorat-2017.pdf
- Admission 2016: http://www.upt.ro/img/files/2015-2016/admission/doctorat/oferte/Oferte_conducatori_doctorat2016_ses_II.pdf
- Admission 2015: http://www.upt.ro/img/files/2014-2015/admission/PhD/Oferte_ale_cond_de_doctorat_IOSUD_UPT_s1.pdf
- contact details of the doctoral supervisors can be found at:
http://upt.ro/img/files/cartetelefon/Carte_de_telefon_Angajati_2020.pdf
- and http://www.upt.ro/img/files/2020-2021/doctorat/OMEN_conducator_doctorat_pe_domenii_2021.pdf

C.2.1.-g the list of doctoral students within the domain with necessary information (year of registration; Advisor)

The list of doctoral students in the field can be found in the publicly available admission orders:

- for the year 2019-2020: http://www.upt.ro/img/files/2019-2020/doctorat/Lista_drd_inmatriculati_2019-2020_ordin_11474.pdf

- and: http://www.upt.ro/img/files/2019-2020/doctorat/Lista_drd_inmatriculati_2019-2020_ordin_12410.pdf
- for the year 2018-2019: http://www.upt.ro/img/files/2018-2019/doctorat/Lista_dr_inmatr_2018-2019_sesiune_sept_ordin_120.pdf
- for the year 2017-2018: http://upt.ro/img/files/2017-2018/doctorat/Lista_dr_inmatr_2017-2018_sesiune_sept_ordin_12866.pdf
- and: http://upt.ro/img/files/2017-2018/doctorat/Lista_dr_inmatr_2017-2018_sesiune_oct_ordin_13940.pdf
- for the year 2016-2017: http://www.upt.ro/img/files/2016-2017/doctorat/docdrd/Doctoranzi_inmatriculati_2016-2017_Ordin_rector.pdf
- for the year 2015-2016: http://www.upt.ro/img/files/2015-2016/doctorat/Candidati_inmatriculati_2015-2016.pdf

C.2.1.-h information on the standards for developing the doctoral thesis

The doctoral theses elaborated in IOSUD-UPT are published at the Politehnica Publishing House as the book, detailed at the following address:

http://www.upt.ro/img/files/2014-2015/doctorat/editare_teza/Instruțiuni_pentru_redactarea_tezelor_de_doctorat_Ed_Politehnica.pdf

Moreover, the templates for the thesis preparation are available considering:

- Initial part (Romanian, English)
- Thesis chapter
- Details on editing the equations that can be found at: http://www.upt.ro/Informatii_documentele-doctoranzilorinmatriculati-incepand-cu-anul-201_286_en.html .

C.2.1.-i information on the opportunities for doctoral students aiming to attend conferences, to publish articles, awarding scholarships etc.

According to the procedure for public defense of doctoral theses in IOSUD-UPT, on the UPT website, doctoral studies section, announcements on public defense are posted, in Romanian and English (for each doctoral thesis), for example:

- http://www.upt.ro/Informatii_anunturi---sustineri-publice-ale-tezelorde-doctorat-in-iosu_293_ro.html
- http://www.upt.ro/Informatii_anunturi---sustineri-publice-ale-tezelorde-doctorat-in-iosu_293_en.html

The theses defended in 2020, with the details regarding the date, time, place where they were defended, the summary of the thesis, the public defense commission can be found at:

http://www.upt.ro/Informatii_teze-de-doctorat-sustinute-in2020_1421_ro.html

The theses defended in 2019, with the details regarding the date, time, place where they were defended, the summary of the thesis, the public defense commission can be found at:

http://www.upt.ro/Informatii_teze-de-doctorat-sustinute-in2019_1164_ro.html



The theses defended in 2018, with the details regarding the date, time, place where they were defended, the thesis summary, the public defense commission can be found at:

http://www.upt.ro/Informatii_teze-de-doctorat-sustinute-in2018_939_ro.html

The theses defended in 2017, with details on the date, time, place where they were defended, the thesis summary, the public defense commission can be found at:

http://www.upt.ro/Informatii_teze-dedoctorat-sustinute-in-2017_834_ro.html

The theses defended in 2016, with details on date, time, the place where they were defended, the summary of the thesis, the public defense commission can be found at:

http://www.upt.ro/Informatii_teze-dedoctorat-sustinute-in-2016-771_ro.html and

[http://www.upt.ro/img/files/2015-2016/doctorat/teze/Teze de doctorat sustinute in 2016.pdf](http://www.upt.ro/img/files/2015-2016/doctorat/teze/Teze_de_doctorat_sustinute_in_2016.pdf)

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:

The indicator is fulfilled.

Ph.D. students have free access to all relevant databases regarding the field of Electrical Engineering and wider including: IEEE Xplore, Elsevier, Springer, Scopus etc.,

The Library databases can be accessed at: <https://library.upt.ro/baze-de-date/>

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:

The indicator is fulfilled.

Each Ph.D. student has an access to the system for the verification of the degree of similarity with other existing scientific or artistic works. IOSUD-UPT has secured the computer program *iThenticate* (<http://www.ithenticate.com/>).

Examples of using the computer program for doctoral students in the field of Electrical Engineering in Annex_C.2.2.2. have been presented.



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:

The indicator is fulfilled.

The doctoral studies contract, settled between IOSUD-UPT and each enrolled doctoral student, explicitly stipulates the obligations assumed by IOSUD-UPT regarding the access of doctoral students to the research infrastructure / facilities, as follows:

- Art.6.B.3 - to ensure the access of the doctoral student to the education and research infrastructure within the doctoral studies (Annex_C.2.2.3. - Doctoral studies contract).

Depending on the specifics of the research laboratory, the doctoral student is trained in order to strictly follow the rules of labor protection and fire prevention and extinguishing.

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:

The indicator is fulfilled.

The UPT has a signed Erasmus agreements with foreign universities as well as the cooperation agreements with enterprises, associations and research centers which enables mobility of the Ph.D. students. Erasmus mobility agreements can be found in Annex_C.3.1.1-1.

The ERASMUS mobility agreements between UPT and foreign universities can be found publicly at:



[http://www.upt.ro/international/Mobilitati-Si-CooperariInternationale_Acorduri-bilaterale-Erasmus+ 8 en.html](http://www.upt.ro/international/Mobilitati-Si-CooperariInternationale_Acorduri-bilaterale-Erasmus+_8_en.html)

The framework agreements between UPT and national or foreign universities can be found publicly at: [http://www.upt.ro/international/Mobilitati-Si-Cooperari-Internationale_Acorduri-cadru-de-cooperare-cu-universitati-din-tara-si-strainatate 31 ro.html](http://www.upt.ro/international/Mobilitati-Si-Cooperari-Internationale_Acorduri-cadru-de-cooperare-cu-universitati-din-tara-si-strainatate_31_ro.html)

Cooperation agreements with enterprises, associations and research centers can be found publicly at: [http://www.upt.ro/international/Mobilitati-Si-CooperariInternationale_Acorduri-de-cooperare-cu-intreprinderi,-asociatiisi-centre-de-cercetare 65 ro.html](http://www.upt.ro/international/Mobilitati-Si-CooperariInternationale_Acorduri-de-cooperare-cu-intreprinderi,-asociatiisi-centre-de-cercetare_65_ro.html)

For the period 2015-2019 mobility was performed by 17+6=23 students in Electrical Engineering Domain. Ratio (%) students who performed mobility / existing students and Doctors number is 109.52%.

CRITERION FULFILLED \geq 35%

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:

The indicator is fulfilled.

Between January 2016 and December 2020, no thesis was cosupervised with foreign experts in the field of Electrical Engineering. At the level of IOSUD UPT, 2 international co-supervised theses were defended during this period. Currently in IOSUD - UPT there are 3 doctoral students whose thesis are co-supervised with foreign experts. The data are presented in detail in **Annex_C.3.1.2-1.** - The minutes of public defense of the doctoral theses co-supervised with foreign experts and the list of doctoral students from IOSUD-UPT whose theses are co-supervised with foreign experts.

- **Annex_C.3.1.2-2.** - presents the list of guests - senior experts who have given courses / lectures for doctoral students.

Annex_C.3.1.2-3. - presents the list of the experts who gave courses / lectures for doctoral students as the outcome of mobility, through the program P1: Development of the national system of research - development Subprogram 1.1 - Human resources "Mobility projects for young researchers from diaspora".

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:

The indicator is fulfilled.

The internationalization of activities is supported by: short-term mobility abroad for doctoral students, participation of doctoral students in summer schools, conferences and other events abroad (**Annex_C.3.1.1.**); inviting leading experts who have given courses and lectures for doctoral students in UPT (**Annex_C.3.1.2-2.** and **Annex_C.3.1.2-3.**); informing the public and stakeholders regarding the doctoral field by posting on the Study in Romania platforms (**Annex_C.3.1.3-2.**); increasing the degree of international visibility of doctoral coordinators and implicitly of the Doctoral School through relevant publications in the field (**Annex_A.3.2.1.**), members of the scientific committees of international publications and conferences, members of the boards of international professional associations; invited to conferences or groups of experts held abroad, members of commissions for the defense of doctoral theses at top foreign universities (**Annex_A.3.2.1.**).

For the internationalization of the activities within the doctoral school, IOSUD - UPT participated in various promotion missions, at educational fairs to attract international doctoral students, preparing collaboration agreements with prestigious universities. Details can be found at:

- http://www.upt.ro/Informatii-utile_upt-la-conferinta-si-expozitiaanuala-nafsa-2019_385_ro.html
- http://www.upt.ro/Informatii-utile_firmele-italiene-vor-o-relatie-maistransa-cu-upt_351_ro.html
- http://www.upt.ro/Informatii-utile_ambasadorul-mexicului-laupt_324_ro.html
- http://www.upt.ro/Informatii-utile_un-nou-acord-semnat-deupt_344_ro.html
- http://www.upt.ro/Informatii-utile_un-nou-acord-internationalsemnat-de-upt_276_ro.html
- http://www.upt.ro/Informatii-utile_upt-a-semnat-un-acord-decolaborare-cu-universitatea-din-ovi_229_ro.html
- http://www.upt.ro/Informatii-utile_reprezentantii-upt-la-aniversareatu-munchen_227_ro.html
- http://www.upt.ro/Informatii-utile_acord-de-colaborare-intre-upt-situ-graz_203_ro.html
- http://www.upt.ro/Informatii-utile_parteneriat-upt---universitateakhazar-azerbaidjan_121_ro.html

Details regarding doctoral theses defended in IOSUD - UPT in the period 2016-2020, having as references foreign experts, are presented in **Annex_C.3.1.3.**

In the field of Electrical Engineering in the period 2016-2020, no doctoral thesis was defended with foreign expert as the member of the commission for public defense.

IV. SWOT Analysis

<p><u>Strengths:</u></p> <ul style="list-style-type: none"> • Very experienced supervisors. All of them have achieved at least 3 times more points than minimum required by CNATDCU. Some of them have more 	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none"> • Lack of interest of students from the other universities (including international) for study admission.
---	--

<p>than 27 times more points than minimum</p> <ul style="list-style-type: none"> • Research infrastructure available to the Ph.D. students. • Free access for all Ph.D. students to all relevant databases of scientific papers. • Students are very satisfied with their supervisors. • Cooperation with the industry 	
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> • Stronger cooperation with industry in terms of employing of the graduate doctors • Electrical engineering is a highly demanded professional field on the labor market. • Stronger internationalization. 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> • Low financial support offered to Ph.D. students by the state. • NDA agreement with industry regarding data used for research. Some students have waited for 6 months to get approval for the publication of the research.

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>e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;</p> <p>f) the contract for doctoral studies;</p>	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.	fulfilled	
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.	fulfilled	
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.	fulfilled	
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.	fulfilled	
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 / human resources development grants is not less than 20%.	fulfilled	
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	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.).		
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	<u>fulfilled</u>	
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.	fulfilled	
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.	Partially fulfilled	
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	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		functions, as provided by the law.		
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%.	fulfilled	
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.	fulfilled	
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	fulfilled	
15.	PI *	B.1.1.1. The ratio between the number of	Partially	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.	fulfilled	
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.	fulfilled	
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%.	fulfilled	
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.	fulfilled	
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.	fulfilled	
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.	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
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.	fulfilled	
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.	fulfilled	
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	fulfilled	
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 studies within the evaluated period (past 5 years) is at least 1.	fulfilled	
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.	fulfilled	
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	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.		
27.	PI	<p>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:</p> <ul style="list-style-type: none"> 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. 	fulfilled	
28.	PI *	<p>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.</p>	fulfilled	
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; 	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<p>e) the content of training program based on advanced academic studies;</p> <p>f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;</p> <p>g) the list of doctoral students within the domain with necessary information (year of registration; advisor);</p> <p>h) information on the standards for developing the doctoral thesis;</p> <p>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>		
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>	fulfilled	
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>	fulfilled	
32.	PI	<p>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.</p>	fulfilled	
33.	PI *	<p>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.</p>	fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
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.	fulfilled	
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.).	fulfilled	

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).

Recommendations

-

Dr. Danijel Topić, Associate Professor

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.

ÎNTÂLNIRI PRELIMINARE / PRELIMINARY MEETING

Vizita de evaluare instituțională - IOSUD / domenii de studii universitare de doctorat a
UNIVERSITĂȚII POLITEHNICA DIN TIMIȘOARA

The institutional evaluation visit - IOSUD / doctoral study domains of the
POLITEHNICA UNIVERSITY OF TIMIȘOARA

Data/ora Date/hour (Bucharest time)	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Observations/ Responsible
EVALUAREA STUDIILOR UNIVERSITARE DE DOCTORAT / DOCTORAL STUDIES EVALUATION			
24 September, 2021 9:00 – 10:00	Întâlnirea echipei de evaluare pentru discutarea principalelor aspecte metodologice legate de activitatea de evaluare a studiilor universitare de doctorat Meeting of panel members for discussing main methodological aspects related to the evaluation of doctoral studies	Toți membrii echipei de evaluare All evaluation panel members	platforma ZOOM ARACIS <i>ARACIS ZOOM platform</i>

Programul⁶ vizitei de evaluare instituțională - IOSUD / domenii de studii universitare de doctorat a
UNIVERSITĂȚII POLITEHNICA DIN TIMIȘOARA

*The timetable of the institutional evaluation visit - IOSUD / doctoral study domains at the
POLITEHNICA UNIVERSITY OF TIMIȘOARA*

Perioada de derulare a vizitei: 27.09.2021 – 1.10.2021

The evaluation period: 27.09.2021 - 1.10.2021

Evaluarea Externă Periodică a domeniului de studii universitare de doctorat
Inginerie electrică
*Periodical External Evaluation of the doctoral study domain **Electrical Engineering***

Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
Luni / Monday, 27.09.2021			
09:00 - 09:45	Întâlnire preliminară online pentru pregătirea și armonizarea etapelor de evaluare, în modul mixt, la nivel de domenii de doctorat și IOSUD <i>Online preliminary meeting for the preparation and harmonization of evaluation steps, in hybrid mode, of doctoral study domains and IOSUD</i>	Comisia de evaluare IOSUD/domenii <i>IOSUD evaluation panel</i> - toți membrii echipei de evaluare <i>all evaluation panel members</i>	Înregistrare audio-video/ platforma ARACIS ZOOM <i>Audio-video recording / ARACIS ZOOM platform</i>
10:00 - 10:45	Întâlnirea online a comisiei de experți evaluatori cu reprezentanții conducerii universității și ai CSUD <i>Online meeting with representatives of the institution and of the Council for Academic Doctoral Studies (CSUD)</i>	Comisia de evaluare IOSUD/domenii <i>IOSUD/domains evaluation panel</i> - toți membrii echipei de evaluare <i>all evaluation panel members</i> - reprezentanți ai conducerii <i>representatives of the University's management</i> - reprezentanți ai CSUD și ai școlii/școlilor doctorale <i>representatives of the CSUD and of the Doctoral School /Schools</i>	Înregistrare audio-video/ platforma Zoom UPT <i>Audio-video recording / UPT Zoom platform</i>

⁶ În perioada vizitei, pot fi solicitate și alte întâlniri, pentru eventuale clarificări.

During the visit, other meetings may be requested for possible clarifications.

Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
		- persoana de contact IOSUD/domenii <i>the contact person for IOSUD / doctoral domains</i>	
16:00 - 17:45	Continuarea activităților de evaluare a domeniului de studii universitare de doctorat Inginerie electrică <i>Continuation of the Electrical Engineering doctoral study domain evaluation activities</i>	Comisia de evaluare Domeniu Inginerie electrică <i>Electrical Engineering Domain evaluation panel</i> - la nivel de domeniu de doctorat <i>at doctoral study domain level</i>	Se lucrează separat. <i>Independent evaluation activities.</i>
Marți / Tuesday, 28.09.2021			
9:00 - 9:45	Activități de evaluare <i>Evaluation activities</i> Întâlnire online a comisiei de experți evaluatori cu responsabilul domeniului de studii universitare de doctorat evaluat și cu echipa care a realizat raportul de evaluare internă <i>Online meeting of Electrical Engineering evaluation panel with the representative and the team who drafted the internal evaluation report</i>	- comisia de experți evaluatori Inginerie electrică <i>Electrical Engineering evaluation panel</i> - responsabilul domeniului de studii universitare de doctorat evaluat <i>the representative of the Electrical Engineering doctoral field</i> - echipa care a realizat raportul de evaluare internă - <i>the team who drafted the internal evaluation report</i>	Înregistrare audio-video/ platforma Zoom UPT <i>Audio-video recording / UPT Zoom platform</i>
10:00 - 10:45	Activități de evaluare <i>Evaluation activities</i> Întâlnire online a comisiei de experți evaluatori cu personalul didactic aferent domeniului evaluat <i>Online meeting of evaluation panel with the teaching staff of evaluated doctoral field</i>	- comisia de experți evaluatori Inginerie electrică <i>Electrical Engineering evaluation panel</i> - personalul didactic din domeniul Inginerie electrică - <i>the teaching staff of the Electrical Engineering doctoral field</i>	Înregistrare audio-video/ platforma Zoom UPT <i>Audio-video recording / UPT Zoom platform</i>
16:00 - 17:00	Întâlnire online cu membrii Comisiei de Etică a universității <i>Online meeting with the members of the Ethics Commission</i>	Comisia de evaluare IOSUD/domenii <i>IOSUD/domains evaluation panel</i> - toți membrii echipei de evaluare <i>all evaluation panel members</i> -membrii Comisiei de Etică <i>Ethics Commission members</i>	Înregistrare audio-video/ platforma Zoom UPT <i>Audio-video recording / UPT Zoom platform</i>
17:00 - 17:45	Activități de evaluare <i>Evaluation activities</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i>	Înregistrare audio-video/ platforma

Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
	<p>Întâlnire online cu membrii Comisiei pentru Evaluarea și Asigurarea Calității (CEAC) / Departamentul de asigurare a calității</p> <p><i>Online meeting with the Commission for Quality Evaluation and Assurance (CEAC) members / Quality Assurance Department</i></p>	<p>- toți membrii echipei de evaluare <i>all evaluation panel members</i></p> <p>- reprezentanți ai CEAC/ Departament AC <i>representatives of Commission for Quality Evaluation and Assurance (CEAC) / Quality Assurance Department</i></p>	<p>Zoom UPT <i>Audio-video recording / UPT Zoom platform</i></p>
18:00 – 18:45	<p>Activități de evaluare <i>Evaluation activities</i></p> <p>Întâlnire online a comisiei de evaluare cu reprezentanți ai angajatorilor absolvenților <i>Online meeting with employers of doctoral graduates</i></p>	<p>- comisia de experți evaluatori Inginerie electrică <i>Electrical Engineering evaluation panel</i></p> <p>- reprezentanți ai angajatorilor <i>employers' representatives</i></p>	<p>Înregistrare audio-video/ platforma Zoom UPT <i>Audio-video recording / UPT Zoom platform</i></p>
Miercuri/ Wednesday, 29.09.2021			
09:00 - 10:00	<p>Întâlnire tehnică online, pentru identificarea aspectelor specifice care trebuie clarificate, dacă este cazul, pe parcursul vizitei la fața locului <i>Online technical meeting to identify specific issues that need to be clarified, if necessary, during the on-site visit</i></p>	<p>Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i></p> <p>- toți membrii echipei de vizită <i>all evaluation panel members</i></p>	<p>Înregistrare audio-video/ platforma ZOOM ARACIS <i>Audio-video recording / ARACIS Zoom platform</i></p>
10:00 – 10:45	<p>Activități de evaluare <i>Evaluation activities</i></p> <p>Întâlnire online a comisiei de evaluare cu studenții doctoranzi <i>Online meeting with PhD students</i></p>	<p>- comisia de experți evaluatori Inginerie electrică <i>Electrical Engineering evaluation panel</i></p> <p>- studenții doctoranzi <i>PhD students</i></p>	<p>Înregistrare audio-video/ platforma ZOOM ARACIS <i>Audio-video recording / ARACIS ZOOM platform</i></p>
11:00 – 11:45	<p>Activități de evaluare <i>Evaluation activities</i></p> <p>Întâlnire online a comisiei de evaluare cu reprezentanți ai absolvenților domeniului</p>	<p>- comisia de experți evaluatori Inginerie electrică <i>Electrical Engineering evaluation panel</i></p> <p>- reprezentanți ai absolvenților <i>representatives of doctoral graduates</i></p>	<p>Înregistrare audio-video/ platforma Zoom UPT <i>Audio-video recording / UPT Zoom platform</i></p>

Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
	<i>Online meeting with Electrical Engineering Domain graduates</i>		
16:00 - 17:45	Continuarea activităților de evaluare a domeniului de studii universitare de doctorat Inginerie electrică <i>Continuation of the Electrical Engineering doctoral study domain</i>	Comisia de evaluare Domeniu Inginerie electrică <i>Electrical Engineering Domain evaluation panel</i> - la nivel de domenii de doctorat <i>at doctoral study domain level</i>	Se lucrează separat. <i>Independent evaluation activities.</i>
Joi/ Thursday, 30.09.2021			
9:00 - 15:00	Reuniuni de lucru față în față ⁷ , vizitarea bazei materiale didactice și de cercetare <i>Face-to-face working meetings, visiting the educational and research infrastructure</i>	- coordonatorul echipei de experți domeniu Inginerie electrică <i>the coordinator of the Electrical Engineering Domain evaluation panel</i> - reprezentanți ai universității <i>university's representatives</i>	Vizită UNIVERSITATE <i>Site visit to the university</i>
16:00 - 16:45	Activități de evaluare <i>Evaluation activities</i> <u>IOSUD și Domenii: Întâlnire online cu directorii/ responsabilii centrelor/ laboratoarelor de cercetare aferente domeniilor de studii universitare de doctorat</u> <i>IOSUD and Domains: Online meeting with the Directors/ persons in charge of the research centers/laboratories within the doctoral study domains</i>	Comisia de evaluare IOSUD și domenii <i>IOSUD and Domains evaluation panels</i> - toți membrii echipei de evaluare <i>all evaluation panel members</i> -directorii centrelor / laboratoarelor de cercetare <i>directors of research centers/ laboratories</i>	Înregistrare audio-video/ platforma Zoom UPT <i>Audio-video recording / UPT Zoom platform</i>
Vineri / Friday, 1.10.2021			
09:00 - 11:00	Finalizarea documentelor <i>Completion of the evaluation documents</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - la nivel de IOSUD <i>at IOSUD level</i> - la nivel de domenii de doctorat	Se lucrează separat. <i>Independent evaluation activities.</i>

⁷ Experții evaluatori la nivelul domeniilor de studii universitare de doctorat pot stabili independent programul vizitei la fața locului, de comun acord cu persoana de contact de la domeniul evaluat și respectând programul întâlnirilor comune cu restul membrilor echipei de evaluare. *The evaluators at doctoral study domain level can independently establish the program of the on-site visit, in agreement with the contact person for the evaluated domain and respecting the schedule of joint meetings with the rest of the evaluation panel members.*

Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
		<i>at doctoral study domain level</i>	
11:00 - 11:45	Întâlnire online pentru concluzii <i>Online meeting for conclusions</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - toți membrii echipei de evaluare <i>all evaluation panel members</i>	Înregistrare audio-video/ platforma ZOOM ARACIS <i>Audio-video recording /ARACIS ZOOM platform</i>
12:00 - 12:45	Întâlnire finală online în vederea prezentării principalelor constatări rezultate în urma evaluării IOSUD și a recomandărilor de îmbunătățire a calității <i>Meeting with representatives of the institution under review to discuss on the conclusions of the evaluation process and the main recommendations</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - toți membrii echipei de evaluare <i>all evaluation panel members</i> - reprezentanții universității <i>university's representatives</i>	Înregistrare audio-video/ platforma Zoom UPT <i>Audio-video recording / UPT Zoom platform</i>

Prof. univ. dr. ing. Florin POPENȚIU VLĂDICESCU

Conf.univ.dr.ing. Florin DRĂGAN

Coordonator experți domeniu Inginerie electrică

Rector