



## **EXTERNAL EVALUATION REPORT**

**UNIVERSITY OF AGRICULTURAL SCIENCES AND  
VETERINARY MEDICINE FROM CLUJ-NAPOCA**

**DOCTORAL STUDY DOMAIN  
ENGINEERING AND MANAGEMENT IN AGRICULTURE AND  
RURAL DEVELOPMENT**

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## **I. Introduction**

### ***1.1. The external evaluation context***

- Type of evaluation:  
Doctoral study domain ENGINEERING AND MANAGEMENT IN AGRICULTURE AND RURAL DEVELOPMENT
- Period of the evaluation visit:  
01-05.11.2021
- Composition of the Experts Committee:  
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### ***1.2. The Doctoral School of Agricultural Engineering Sciences***

The University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca (USAMVCN) organizes doctoral university studies within the Organizing Institution of Doctoral University Studies -the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca (IOSUD USAMVCN). IOSUD USAMVCN is led by the Council for University Doctoral Studies, hereinafter referred to as CSUD -USAMVCN. The doctoral university studies are carried out based on the Education Law no. 1/2011, of Law no. 49/2013, of the Code of Doctoral Studies GD 681/2011, an amended form including and completing GD no. 134/2016, valid from 10.03.2016, of the USAMV Charter, of the RU24 Regulation RU 24 for the organization and development of doctoral university studies, as well as of the subsequent modifications of these regulations. The doctoral university study programs are organized and carried out within IOSUD -USAMV CN, within the two doctoral schools. Doctoral School of Agricultural Engineering (SDSAI) and Doctoral School of Veterinary Medicine (SDMV). Each doctoral school is run by a Director of the Doctoral School and a Doctoral School Council. IOSUD and the two doctoral schools operate based on their own organization and functioning regulations (RU 24, RU 65, RU 66).

The Doctoral Schools were reorganized within IOSUD in 2014, following the establishment of the legal framework and the Procedure Rules approved by the University Senate (Annex 1) in the meeting of 13.02.2014. They have the same rank as the departments and can organize their own research centers and / or laboratories that can function as income and expenditure units within the university, according to the provisions of art. 131, art. 133 para. (4) and art. 134 of Law no. 1/2011.

The doctoral school of Agricultural Engineering Sciences (SDSAI) is led by the director of the doctoral school -Prof. Cristina Bianca Pocol, PhD and by a Council of the doctoral school. The Council of the Doctoral School includes three doctoral supervisors: Prof. Cristina Bianca Pocol, PhD; Prof. Teodor Rusu,



PhD, Prof. Adela Pinte, PhD and a doctoral student Ignat (Socaci) Maria Valentina (<https://www.usamvcluj.ro/consiliul-scolii-doctorale-de-stiinte-agricole-ingineresti/>).

The Doctoral School of Agricultural Engineering Sciences organizes doctoral studies in 5 fields: Agronomy, Horticulture, Biotechnology, Animal Husbandry and Engineering and Management in Agriculture and Rural Development (IMADR). The Biotechnology domain was established in 2004 (Annex 2), and the IMADR domain in 2018 (Annex 3). There are 53 doctoral supervisors (28 women, 25 men) affiliated to SDSAI, of which 39 are full-time USAMVCN employees (full-time employees), 10 are retired doctoral supervisors (associate professors) and 4 are active PhD supervisors from other universities.

Within IOSUD USAMVCN, doctoral studies are carried out only to obtain the scientific doctorate, on state-financed positions, as well as fee-based ones, full-time (with scholarship and without scholarship) and part-time (without scholarship), respectively.

The objectives of the Doctoral School of Agricultural Engineering Sciences are:

- Ensuring an adequate and quality curricular project for the education and training of doctoral students;
- Ensuring and supporting an organized training framework for research aimed at young PhD students, by developing knowledge and skills necessary to carry out research activities;
- Development of the critical spirit necessary for the objective evaluation of research results;
- Providing training skills and the tools needed to write a doctoral thesis and scientific papers;
- Implementing of professional ethics principles, as well as deontology and research ethics coordinates;
- Practicing the skills needed to develop and manage research projects;
- Supporting and advising doctoral students and doctoral supervisors during the doctoral internship and the thesis completion stage;
- Permanent improvement of the material base for research and development of doctoral research in accordance with the research, technological development, and innovation strategy of USAMVCN, with the national and European strategy in the field of research.

### ***1.3. The Doctoral Study Domain “Engineering and Management in Agriculture and Rural Development”***

The doctoral study domain of Engineering and Management in Agriculture and Rural Development was established based on the Minister of National Education Order, Nr. 4209/2018 of July 31, 2018 (Annex 3) and operates with four full-time PhD supervisors in USAMVCN, of which 3 defended their habilitation thesis in USAMV Bucharest and 1 in USAMVCN. Other 3 doctoral supervisors are affiliated to the SAI doctoral school, with their habilitation in the field of Food Engineering.

There are several areas of expertise (<https://www.usamvcluj.ro/invatamant/doctordat/883-2/>), according to the area of doctoral supervisors such as: Management and business management, Analysis of rural development strategies, Statistical modeling of rural areas, marketing research, economic evaluation of natural resources and ecosystem services, Agricultural policies and rural development, Sustainable agroforestry systems, High Nature Value Farming; Agricultural AKIS, Agribusiness, Strategic planning in agriculture and rural development, management consulting.

In accordance with the Code of Doctoral Studies (GD 681 / 29.06.2011) the doctoral



program is carried out only within the IOSUD under the coordination of a doctoral supervisor and includes:

- a training program based on advanced university studies, PSUA (year I);
- an individual scientific research program, PC (years II and III for Agricultural Engineering Sciences)



## II. Methods used

The external evaluation process started with the review of the Self Evaluation File of the doctoral study in Engineering and Management before the evaluation visit. This file contained the Internal Evaluation Report as well as the relevant documents in support of it. The documents in support of the internal evaluation report were in the form of Annexes and links directing to documents or information made available in the USAMVCN website. During this phase a series of questions related to the relevant performance indicators and criteria were identified and listed, which would be answered in the online meetings that would be held during the institutional evaluation visit.

The 5-day institutional evaluation was realized during the dates 01-05/11/2021, where the External Committee members realized the meetings defined in the agenda of the visit such as:

- Meeting/Discussions with representatives of the institution and of the Council for Academic Doctoral Studies (CSUD),
- Meeting/Discussions with the contact person for the doctoral study domain in Engineering and Management,
- Meeting/Discussions with the doctoral advisors in the doctoral study domain in Engineering and Management.
- Meeting/Discussions with the members of the Ethics Commission,
- Meeting/Discussions with the Commission for Quality Evaluation and Assurance (CEAC) members/ Quality Assurance Department.
- Meeting/Discussions with PhD students.
- Meeting/Discussions with the Directors/ persons in charge of the research centers/laboratories within the doctoral study domain of Engineering and Management.
- Meeting/Discussions with Doctoral Schools Council (CSD members).

However, since the doctoral study domain in Engineering and Management it has not yet any graduates, meetings with employers and graduates of the said doctoral study domain could not be held.

The visit to the buildings was realized by the experts' committee coordinator. This site visit included in the institution's property, comprising:

- 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.;

During all these meeting, various issues related to the evaluation of the doctoral domain in Engineering and Management in Agriculture and Rural Development were reviewed, by clarifying specific elements, for which relevant questions were raised.

After the visit and the meeting held, the experts' committee started the work to draft the external evaluation report based on the available documentation and the information collected during the meetings and visits conducted in this Institution.



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

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

The analysis of this domain on Institutional Capacity focuses on evaluating the fulfillment by the Institution of the criterions related to:

- The administrative, managerial institutional structures and the financial resources.
- Research infrastructure.
- Quality of human resources.

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

The analysis of this criterion focuses on evaluating the standards fulfillment by the Institution related to:

- The implementation of the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies by IOSUD.
- The possession by IOSUD of the logistical resources necessary to carry out the doctoral studies' mission.
- 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.

*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.*

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain.
- The inclusion of 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 by the doctoral school' Regulation.

***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:***

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is confirmed that the following regulations exist and are implemented by USAMVCN:

*(a) the internal regulations of the Doctoral School;*

- The institutional regulation for organizing and conducting doctoral studies, in force at the time of the internal evaluation, was adopted by the Decision of the USAMV CN Senate of March 17, 2017. The regulation for organizing and conducting doctoral studies CSUD (RU 24) can be

viewed on the web page ([http://www.usamvcluj.ro/images/2019/Carta\\_USAMV/3/RU%2024%20Regulament%20de%20organizare%20i%20desfurare%20a%20studiilor%20universitare%20de%20doctorat%20la%20USAMVCN.pdf](http://www.usamvcluj.ro/images/2019/Carta_USAMV/3/RU%2024%20Regulament%20de%20organizare%20i%20desfurare%20a%20studiilor%20universitare%20de%20doctorat%20la%20USAMVCN.pdf))

- The Regulation of the Doctoral School of Agricultural Engineering Sciences (RU 65) was adopted by the Decision of the USAMVCN Senate of 15.02.2019, revised and approved in its current version by the Decision of the USAMVCN Senate of 19.02.2021. The regulation can be viewed on the university website and that of the doctoral school (<https://www.usamvcluj.ro/wp-content/uploads/2021/03/RU-65-Regulament-de-organizare-s%CC%A6i-funct%CC%A6ionare-al-S%CC%A6colii-Doctorale-de-S%CC%A6tiint%CC%A6e-Agricole-Ingineres%CC%A6ti.pdf>)

(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;*

- The elections for the CSUD structures and the Doctoral Schools Councils are made according to the legislation in force and the Methodology regarding the process of constitution and election of the management structures and functions at the level of USAMV Cluj-Napoca (RU 5). The methodology can be viewed on the web page [https://www.usamvcluj.ro/images/2019/Regulament\\_alegeri\\_mandatul\\_2020-2024.pdf](https://www.usamvcluj.ro/images/2019/Regulament_alegeri_mandatul_2020-2024.pdf).
- All information related to elections, both for doctoral supervisors and for doctoral students or external members are posted on the website at the link <https://www.usamvcluj.ro/universitatea/documente-publice/alegeri-universitare/>, including the election calendar, the candidacies submitted, the lists of persons with the right to vote, the election results.
- The members of CSD are elected by universal, direct, and secret ballot of the doctoral supervisors from the doctoral school, respectively of the doctoral students from USAMV CN. The applications are registered at the USAMV CN Registry, are submitted to the Rector's Office, and are validated by the University Senate. Voter lists and ballots are drawn up by the university's Electoral Bureau.
- CSDSAI members are elected according to the same methodologies (RU 5) and are validated by the University Senate.
- The archive containing the candidacies and the results of the elections in the structures of CSDSAI, CSDMV and CSUD can be viewed on the web page <https://www.usamvcluj.ro/universitatea/documente-publice/alegeri-universitare/>. The Council of the Doctoral School of Agricultural Engineering Sciences (CSDSAI is composed of 5 members, of which 3 doctoral supervisors, 1 external member and 1 doctoral student and is led by the Director of the Doctoral School, appointed by the CSUD director <https://www.usamvcluj.ro/candidaturi-scolile-doctorale-2020-2024/>; <https://www.usamvcluj.ro/rezultate-cadre-didactice-scolie-doctorale-2020-2024/>; <https://www.usamvcluj.ro/rezultate-scolile-doctorale-studenti/>).

c) *the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);*

- Admission to the doctorate in USAMV CN is made according to the provisions of the Regulation on the organization and conduct of the admission contest in USAMVCN (RU 45) <https://www.usamvcluj.ro/wp-content/uploads/2021/03/RU-45-Regulament-privind-organizarea-s%CC%A7i-desfa%CC%86s%CC%A7urarea-concursului-de-admitere-pentru-anul-universitar-2021-2022.pdf>). The regulation stipulates the conditions for registration, the method of verification



and grading of the competition tests, the method of communication of the results and the registration of the admitted students. The admission criteria are:

- a) ½ the average of graduating the bachelor's degree or the bachelor's and master's degree;
- b) ½ the grade obtained at an interview regarding research experience, motivation to be employed in doctoral studies, elaboration of a research project and testing of knowledge in the field of doctorate (Art. 18, paragraph 2). All information necessary to participate in the admission contest is public on the doctoral school website.
- USAMVCN has imposed selection criteria that include both bachelor's and master's graduation averages and language skills. In addition to the legal provisions, candidates must meet the following minimum conditions:
  - a) to hold a master's degree or its equivalent, from the country or from abroad, according to art. 153 para. (2) of Law no. 1/2011 of national education.
  - b) to total, on the bachelor's and master's cycles of university education, at least 300 European transferable credits (ETC);
  - c) the minimum average 8.00 per bachelor's degree for the budgeted places (arithmetic average of the minimum bachelor's degree study years 8 and of the final bachelor's degree completion exam 8) and the minimum general average of 9.00 per master's degree (arithmetic average of the master minimum 9 and the final exam for master studies minimum 9);
  - d) minimum average 7.00 at the license for fee-paying places (arithmetic average of the minimum 7 years of undergraduate studies and of the final examination of the minimum 7 studies of the bachelor's degree) and minimum general average 7 at the master's degree (arithmetic average of the minimum master's years 7 and the dissertation exam minimum 7);
  - e) to present a certificate of linguistic competence in English issued by faculties / departments / departments of some educational institutions authorized in this respect minimum level B2, or certificates of linguistic competence with international recognition (Cambridge, Toefl, etc.).
  - f) to present a declaration on his / her own responsibility that he / she did not have any disciplinary violations during the years of study that were sanctioned by the Ethics Commission of the university;
- The regulation for completing doctoral studies at USAMVCN is developed by doctoral schools and approved by CSUD, the Board of Directors and the USAMVCN Senate (RU24A <https://www.usamvcluj.ro/wp-content/uploads/2021/05/RU-24A-Regulament-de-finalizare-a-studiilor-universitare-de-doctorat-la-IOSUD-USAMVCN.pdf>). It contains the stages and deadlines for the public defense of the doctoral thesis, as well as the documents necessary for the preparation of the doctoral file. According to the USAMVCN Doctoral Studies Completion Regulations and the SAI Doctoral School Regulations and the Doctoral Studies Contract, each doctoral student is obliged to publish at least one article in an ISI journal with an impact factor on the topic of the doctoral thesis, as first author. The regulations for completing doctoral studies and the rules for writing doctoral theses, accompanied by models are available on the website of the doctoral school. (<http://www.usamvcluj.ro/index.php/doctorat/acte-necesare-pentru-sustinerea-publica>).

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d) *the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;*

- In IOSUD USAMVCN are approved and made public on the DAC website the procedures for recognizing the quality of doctoral supervisor or the qualification obtained abroad (PO-88) and recognition of the doctoral degree obtained in other states (PO-123). These can be accessed directly from the page of the university, the doctoral school, in the section Regulations, Procedures, forms (<https://www.usamvcluj.ro/invatamant/doctorat/activitati-csud/>) or of the DAC.

e) *functional management structures (Doctoral School Council) giving as well proof of the regularity of meetings;*

- The CSD meets whenever necessary, at the request of the CSD Director, CSUD, or its members. The manner of fulfilling the attributions of the Doctoral School Council is defined in the Regulation for the organization and development of doctoral university studies (RU 24) and in the Regulation of the Doctoral School (RU 65). Also, the CSDSAI decisions can be consulted on the web page: <http://www.usamvcluj.ro/index.php/doctorat/consiliul-scolii-doctorale-de-stiinte-agricole-ingineresti>). The CSUD meets whenever necessary at the request of the CSUD Director or at least one third of its members. The decisional activity of CSUD is public and can be accessed at the internet address: <http://www.usamvcluj.ro/index.php/doctorat/hotararile-consiliului-studiilor-universitare-de-doctorat>.

f) *the contract for doctoral studies;*

- The doctoral studies contract (Annex A.1.1.1.) contains the rights and obligations of doctoral students, doctoral supervisors, as well as IOSUD-USAMVCN. The contract is concluded with each doctoral student separately, after the validation of the admission contest, for the entire training period of the doctoral student and includes the clauses specified in the Code of doctoral studies. The model of the framework contract for doctoral university studies is elaborated by CSUD and endorsed by the legal office. The study contract is amended by additional documents when the status of the doctoral student changes (form of funding, form of education, extension of the doctorate, change of supervisor) or when this is required by changes in legislation in the field of doctoral education. The framework model can be viewed on the university website.

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

- In SDSAI, there is a Commission for evaluation and quality assurance at the level of doctoral schools (CEACSD), including two doctoral supervisors and a doctoral student (<http://dac.usamvcluj.ro/responsabili.php>). Based on the analysis of the satisfaction questionnaire applied to doctoral students and the analysis of the annual activity reports, CEACSD formulates proposals to improve the quality of education, including the Training program based on Advanced University Studies. At the IOSUD level there is a procedure regarding the evaluation and internal monitoring of the PO-125 doctoral schools ([http://dac.usamvcluj.ro/proceduri\\_opertionale.php](http://dac.usamvcluj.ro/proceduri_opertionale.php)).

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that in USAMV CN the doctoral university studies are carried out based on the National Education Law no. 1/2011, Law no. 49/2013, of the Code of Doctoral University Studies GD 681/2011, consolidated by including and amending GD no. 134/2016, valid from 10.03.2016, of the USAMV Charter and its own regulations.

*Recommendations: No Recommendations*

***The indicator is fulfilled.***



**Performance Indicator A.1.1.2.** *The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that the regulations of the doctoral school (RU 65) were drafted according to the legal provisions, by consulting all active affiliated doctoral supervisors and were voted by their absolute majority, by universal, direct, secret, and equal vote. The Regulations of the Doctoral School include criteria, procedures and mandatory standards for the aspects specified in art. 17, par. 5 of GD 681/2011, with subsequent amendments and completions.

- a) Acceptance of new doctoral supervisor members, as well as regulations regarding the procedure for revoking a doctoral supervisor as member of the doctoral school.
- b) Decision-making mechanisms regarding the opportunity, structure and content of the training program based on advanced university studies.
- c) The procedures for changing the doctoral supervisor of a certain doctoral student and the procedures for mediating conflicts.
- d) The conditions for the interruption of the doctoral program.
- e) Ways to prevent fraud in scientific research, including plagiarism.
- f) Ensuring access to research resources.
- g) The attendance obligations of doctoral students, according to a methodology developed by MEN.

*Recommendations: No Recommendations*

***The indicator is fulfilled.***

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

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.
- The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.

**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.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that the IOSUD of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca possess an effectiveness and appropriate IT system to keep track of doctoral students and their academic background. The integrated academic management system as evidenced in



Annex A.1.2.1, the university monitors the activity of students, as well as the financial situation for students in state-funded places. The students benefit from accounts in which they can visualize their situation at doctorate levels as well as they also do report their yearly research activity. This activity is monitored and audited according to a schedule approved by the board of directors and informed, respectively posted on the website of the Quality Assurance Department. Accessing the Intranet account is done from the main page of the website of the University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca by clicking on the Intranet or using the link <https://intranet.usamvcluj.ro/>. The personal data file corresponds to the registration form upon admission, which becomes a study contract after the candidate is admitted.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

***Performance Indicator A.1.2.2. The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.***

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that at the IOSUD level, there is a computer program that is used to verify the percentage of similarity for all doctoral theses subject to pre-examination. The doctoral theses are verified to determine the percentage of similarity, according to the legislation in force and the Regulation for the completion of doctoral studies (RU24a). From 2019, the program used to verify doctoral theses is "Sistemantiplagiat" (<https://sistemantiplagiat.ro/>), a program recognized by CNATDCU according to OMEN 5229/2020. Prior to this date, the program used was Plagiarism Detector. A license is to be found at the doctoral school where the verification of the documents requested by the doctoral students, or the doctoral supervisors is ensured. Accounts are activated on this platform for the directors of the doctoral schools, the director, and the Secretariat of the doctoral school (Annex A.1.2.2a and Annex A.1.2.2.b).

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- Existence of research or institutional / human resources development grant under implementation, per doctoral study domain under evaluation, existence of research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain.
- The percentage of doctoral students active, who 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.



- The doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system used to reimburse professional training expenses of doctoral students.

**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.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that doctoral supervisors in the domain of Engineering and Management in Agriculture and Rural Development have coordinated several research grants and institutional development projects during the reporting period, as evidenced in Annex A.1.3.1, with the involvement of doctoral students in research activities related to their research topic or that are complementary, reported in Annex A.1.3.2.a. At the time of submitting this report, the doctoral supervisors in the domain coordinate 2 national and international research projects and 5 human resources / institutional development projects. The grants aimed to attract funds for the research activity of doctoral students, to provide the equipment and consumables necessary for the doctoral projects as well as to support participation in international courses, internships, and scientific events.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that doctoral supervisors of the domain of Engineering and Management in Agriculture and Rural Development permanently attract funds from national and international research grant competitions. At the time of submitting this report, 6 doctoral students (30%) are funded for a minimum of 6 months from research projects or institutional development projects. The list of doctoral students and the funding projects is presented in Annex A.1.3.2.a. Starting with 2015, USAMVCN grants scholarships from its own funds to doctoral students enrolled on a lower budget and non-scholarship budget basis, based on the signing of an addendum to the doctoral study contract by which doctoral students undertake to be present at university 8 hours/day.

*Recommendations: No recommendations*

***The indicator is fulfilled.***



**Performance Indicator \*A.1.3.3.1** *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.).*

Referring to Annex A.1.3.3.a, as well as to the meetings/discussions held during the evaluation visit, to each doctoral student has been annually allocated an amount of 2000 lei for participation in conferences, courses, research internships, and publications. In addition to this amount, doctoral students' costs are covered by the doctoral school on participating to the International Symposium "Life Sciences for Sustainable Development" (previous title "Prospects for the 3rd Millennium), organized every year by USAMV Cluj-Napoca.

Referring to the decision of the Administration Council, Annex A.1.3.3.b, supervisors and PhD students are financially supported for the publication of articles in journals from the Q1 (75%) and Q2 (50%) quartiles.

According to the decision of the Administration Council ([https://cercetare.usamvcluj.ro/online/hot\\_ca/2010/ca\\_9\\_iun\\_2010.pdf](https://cercetare.usamvcluj.ro/online/hot_ca/2010/ca_9_iun_2010.pdf)), 50% of the amounts collected from doctoral students enrolled in the fee are available to the supervisor and can be used to cover the doctoral student's expenses (professional training, materials), and 20% are available to the doctoral school. The payment of participation/publication fees or the purchase of materials are made based on a report of necessity/travel order approved by the head, director of the doctoral school, director of CSUD and administration. It is considered that the amounts spent for professional training exceed, on average, 10% of doctoral grants.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

The analysis of this criterion focuses on evaluating the standard fulfillment by IOSUD related to possessing a modern research infrastructure to support the conduct of doctoral studies' specific activities.

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

This standard analysis focuses on evaluating the performance indicator fulfillment related to the venues and the material equipment available to the doctoral school to enable the research activities in the domain on Engineering and Management in Agriculture and Rural Development, in line with the assumed mission

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



and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.).

**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.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that the scientific research activities of professors, researchers and doctoral students are carried out within the institutes, centers, and laboratories of USAMVCN. The research infrastructure is reported in the link <https://www.cercetare.usamvcluj.ro/wordpress/unitati-de-cercetare/> and in Annex 8. The research equipment of IOSUD is presented on the websites of the research units (<https://cercetare.usamvcluj.ro/ISV/unitati-de-cercetare/>) and is posted on the ERRIS platform. The offer of analytical and scientific consulting services is presented at the link <http://cercetare.usamvcluj.ro/ISV/servicii-analitice/>.

The doctoral students in the domain of Engineering and Management in Agriculture and Rural Development have access to the existing facilities in the 3 research and production stations and in the 3 farms of the university as well as to the entire USAMVCN research infrastructure. A list of research centers and laboratories and equipment relevant to the domain of Engineering and Management in Agriculture and Rural Development is presented in the table below.

Table A.2.1.1. List of research centers and laboratories and equipment relevant to the domain of Engineering and Management in Agriculture and Rural Development

No	Laboratory	Coordinator	Link ERRIS
1	Research and Development Center for Waste Water Management	Conf. dr. Călin Vac	<a href="https://eeris.eu/ERIF-2000-000P-2932">https://eeris.eu/ERIF-2000-000P-2932</a>
2	Research and Innovation Laboratory for Entrepreneurship and Technology Transfer (IRCETT)	Conf. dr. Călin Vac	<a href="https://eeris.eu/ERIF-2000-000C-0547">https://eeris.eu/ERIF-2000-000C-0547</a>
3	Interdisciplinary Laboratory of Data Analysis and Mining, Mathematical Modeling and GIS	Prof. Dr. Ioana Pop	<a href="https://erris.gov.ro/Data-Analysis-and-Math-Modeling">https://erris.gov.ro/Data-Analysis-and-Math-Modeling</a>
4	Center for Biodiversity and Conservation (CBC)	Prof.dr. Corina CĂTANĂ	<a href="https://erris.gov.ro/Center-for-Biodiversity-and-">https://erris.gov.ro/Center-for-Biodiversity-and-</a>
5	Research Center for Plant Biodiversity (CCSBP)	Conf.dr. Adriana SESTRĂȘ	<a href="https://erris.gov.ro/Res-Centr-Plant-Biodiv">https://erris.gov.ro/Res-Centr-Plant-Biodiv</a>
6	Research Center for Plant Breeding (RCPB)	Prof.dr. Radu SESTRĂȘ	<a href="https://erris.gov.ro/Res-Centr-Plant-Breeding">https://erris.gov.ro/Res-Centr-Plant-Breeding</a>



The Central Library (RU 31), of height Ug + Gf + 5F, has a built area of 1,100 square meters and an area of 5,800 square meters and provides reading rooms, bookstores, archive, bookstore, a 160-seat amphitheater with audio-video of the utmost importance to increase the quality of the training and academic process, as well as contribute to the complex development of doctoral students. The USAMV library has a documentary collection consisting of books, courses, magazines, newspapers, DVDs of over 170,000 volumes, managed with the integrated automation system for libraries "Liberty 3". The online catalog (1980-present) can be consulted on the library's website <https://www.cercetare.usamvcluj.ro/wordpress/biblioteca/>.

USAMV Cluj Napoca is a partner of the ANELIS + project (<https://www.enformation.ro/>) allowing all computers connected to the USAMV Cluj-Napoca server to access a series of platforms and collections of journals and scientific research literature, in full text format (Annex A.2.1.1.), as follows:

Permanent access:

- Clarivate Analytics – Web of Science Core Collection, Journal Citation Reports, Derwent Innovations Index: <http://webofknowledge.com>;
- Science Direct: <http://www.sciencedirect.com>;
- SpringerLink: <http://link.springer.com/>;
- CABI VETMED Resource: <http://www.cabi.org/vetmedresource/>

Periodical access:

- ProQuest - <https://search-proquest-com.am.e-nformation.ro/>
- Wiley – Blackwell: [www.blackwell.com](http://www.blackwell.com);
- Scopus: <https://www.scopus.com/>;
- Cambridge Journals Online: [www.journals.cambridge.org](http://www.journals.cambridge.org)
- Oxford University Press: [www.oxfordjournals.org](http://www.oxfordjournals.org)
- SAGE: [www.online.sagepub.com](http://www.online.sagepub.com);
- American Institute of Physics: [www.scitation.aip.org](http://www.scitation.aip.org);

Academic partnerships: with the GOOGLE company allowing the university to benefit free of charge from the most advanced platform with email services and online collaboration; with Microsoft, for the university to benefit from a license at optimal prices and a free upgrade for: Microsoft Windows, Microsoft Office, and Microsoft Windows Servers; with BitDefender.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

The analysis of this criterion focuses on evaluating the standards fulfillment by the Institution related to:

- Sufficient qualified staff to ensure the conduct of doctoral study program at the level of each domain.
- Visible scientific activity at international level carried by the doctoral advisors.

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



This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- Minimum three doctoral thesis advisors within the doctoral domain on Engineering and Management in Agriculture and Rural Development, 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 least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.
- The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.
- The 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%.

**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.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that all 4 doctoral supervisors in the doctoral domain on Engineering and Management in Agriculture and Rural Development meet the CNATDCU minimum standards for Commission 14 of CNATDCU, Plant and Animal Resources Engineering (OM 6129/2016), both for the total score and for each individual criterion as shown in table below. The complete lists of publications (books, articles, conferences), research projects and the visibility (professional prestige) of doctoral supervisors is reported in the individual files of doctoral supervisors in the doctoral domain (Annex A.3.1.1.).

Table A.3.1.1. Degree of compliance with CNATDCU standards

No	Name	Score achieved				Fullfilled
		A1 min. 100	A2 min. 260	A3 min 60	Total min. 420	
1.	Arion Horațiu Felix	265.54	1610.70	1529.13	3405.37	Yes
2.	Dumitraș Diana Elena	189.46	880.98	609.34	1679.78	Yes
3.	Jitea Ionel Mugurel	233.75	987.99	387.42	1597.16	Yes
4.	Ilea Marioara Elisabeta	226.76	873.61	367.76	1468.14	Yes

*Recommendations: No recommendations  
The indicator is fulfilled.*



**Performance Indicator \*A.3.1.2.** *At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that the four Doctoral advisors in the field of Engineering and Management in Agriculture and Rural Development are tenured professors within IOSUD and have permanent and full-time employment contracts at USAMVCN (Annex 16, Annex A.3.1.2). The supervisors are found in the job descriptions of the doctoral schools, visible on the Intranet platform.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that the subjects in the training program based on advanced university studies related to the domain (Table A.3.1.3., Annex 9) are supported by teachers who have the quality of doctoral supervisor / qualified within USAMVCN, with proven expertise in the field of subjects taught, according to the CVs that can be viewed on the website of the doctoral school: Prof. Dr. Diana Dumitraș, habilitated, doctoral supervisor in Engineering and Management in Agriculture and Rural Development; Prof. Dr. Ion Oltean - doctoral supervisor in Agronomy; Prof. Dan Vodnar - habilitated, PhD supervisor in Biotechnology; Prof. Dr. Ioan Marcus - PhD supervisor in the field of Veterinary Medicine; Prof. Dr. Andrei D. Mihalca - qualified, doctoral supervisor in Veterinary Medicine. The subject of Ethics and academic integrity is held by Lecturer Vasile Cuzerzan, PhD in Sociology. Optional subjects are also supported by USAMVCN PhD supervisors or prestigious external collaborators.

Table A.3.1.3. Compulsory subjects PSUA – SDSAI

No.	Subject	Professor	Hours of course	Hours of practical works	Hours Sem.	Credits
1.	Principles of research methodology in plant and animal resource engineering	Prof. Dr. Diana Dumitraș	2	-	2	6
2.	The methodology of elaborating the doctoral thesis	Prof. Dr. Ion Oltean	1	-	1	3
3.	Scientific documentation	Prof. Dr. Dan C. Vodnar	1	1	-	3
4.	Elaboration of scientific papers, oral presentations and posters	Prof. Dr. Andrei D. Mihalca	1	1	-	3
5.	Design and management of research grants	Prof. Dr. Ioan Marcus	1	-	1	3
6.	Ethics and academic integrity	Lector Dr. Vasile Cucerzan	1	-	-	2
7.	Compulsory specialty from the field	Conducător de doctorat	1	1	-	4
<b>TOTAL</b>			<b>8</b>	<b>3</b>	<b>4</b>	<b>24</b>

*Recommendations: No recommendations*

**The indicator is fulfilled.**

**Performance Indicator \*A.3.1.4.** The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs<sup>2</sup> does not exceed 20%.

Referring to the information provided in the Annex A.3.1.4. on doctoral students' supervisors' distribution, at the time of this report, from the four doctoral supervisors, there is only one doctoral supervisor (25%) who simultaneously coordinates 9 doctoral students – Prof. Dr. Felix Arion. There is no doctoral supervisor in the domain to coordinate more than 12 PhD students.

*Recommendations: The study domain should increase the number of doctoral thesis advisors.*

**The indicator is partially fulfilled.**

<sup>2</sup> 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No.1/2011 with subsequent amendments and additions, with additional extension periods approved as per Article 39, paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.



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

This standard analysis focuses on evaluating the performance indicators fulfillment of:

- 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 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.
- 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.

***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.*

Referring to the assessed data in Annex A.3.1.1. and the meetings/discussions held during the evaluation visit, it is ascertained that the four doctoral supervisors in the doctoral domain of Engineering and Management in Agriculture and Rural Development have at least 5 indexed Web of Science publications with relevant relevance for the domain, as shown in the individual CNATDCU Standards Compliance Sheets and in the selective list of publications. A synthesis of papers published by doctoral supervisors in journals listed in international databases Web of Science, Scopus, Google Scholar is provided in the table A.3.2.1. below. At the same time, doctoral supervisors demonstrate national and international visibility through membership in scientific committees of international publications and conferences; membership

in the boards of international professional associations; guest at conferences or groups of experts held abroad.

Table A.3.2.1. Synthesis of papers published by doctoral supervisors in journals listed in international databases Web of Science, Scopus, Google Scholar

No	Name	Status	Institute	Overall activity		Last 5 years (2016 - 2020)	
				Total	Of which:	Total	Of which:
					Web of Science		Web of Science
1.	Arion Horațiu Felix	Tenured	USAMV Cluj	90	24	28	10
2.	Dumitraș Diana Elena	Tenured	USAMV Cluj	64	22	18	11
3.	Jitea Ionel Mugurel	Tenured	USAMV Cluj	65	9	23	5
4.	Ilea Marioara Elisabeta	Tenured	USAMV Cluj	42	13	11	5

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

Referring to the assessed documents, it is ascertained that the four doctoral advisors assigned to the Engineering and Management in Agriculture and Rural Development field of doctoral studies, based on the scientific results from the last five years, have obtained 100% of the score required by the minimum CNATDCU standards as evidenced in Annex A.3.2.2. which provides a detailed presentation of the activity results from the file with the Factors for fulfilling the standards.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

## **Domain B. EDUCATIONAL EFFECTIVENESS**

The analysis of this domain on Educational Effectiveness focuses on evaluating the fulfillment by the Institution of the criteria related to:

- The number, quality and diversity of candidates enrolled for the admission contest.
- The content of doctoral programs.
- The results of doctoral studies and procedures for their evaluation.



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

The analysis of this criterion focuses on evaluating the standards fulfillment by the Institution related to:

- The capacity to attract candidates from outside the higher education institution or several candidates exceeding the number of seats available for the doctoral studies.
- The academic, research and professional performance the candidates admitted to doctoral studies demonstrate.

*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.*

This standard analysis focuses on evaluating the performance indicators fulfillment related to 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 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.

***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.*

Referring to the assessed Institution's document, related to the quality of candidates admitted and the meetings/discussions held during the evaluation visit, it is ascertained that within the field of Engineering and Management in Agriculture and Rural Development, as presented in Table B.1.1.1. below, for the period 2018-2020, the ratio between the available positions for admission and the number of registered candidates is 1.5. At the same time the Engineering and Management in Agriculture and Rural Development domain has succeeded in attracting 2 PhD students graduating from other IOSUDs for the academic year 2018-2019, so the ratio between the number of doctoral students graduating from non-IOSUD masters' programs admitted to budgeted places and the number of available budgeted places is on average, for the evaluated period, 0.20.

Table B.1.1.1. Number of available doctoral student positions in the domain of Engineering and Management in Agriculture and Rural Development for doctoral students in the period 2018-2020

Academic Year	Available positions for admission - buget	Registered candidates	Ratio no. candidates/no. available positions	Enrolled PhD students
2018/2019	6	7	1.17	6 buget + 1 taxă
2019/2020	4	8	2.00	4 buget + 2 taxă
2020/2021	7	8	1.42	7 buget + 0 taxă
<b>TOTAL</b>	<b>17</b>	<b>23</b>	<b>1.35</b>	<b>20</b>

*Recommendations: No recommendations*

**The indicator is fulfilled.**

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

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- Selection criteria to doctoral study program admission 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.
- The expelling rate, including renouncement / dropping out of doctoral students.

**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.*

Referring to the assessed Institution's Regulation on the organization and conduct of the admission contest in USAMVCN (RU 45 <https://www.usamvcluj.ro/wp-content/uploads/2021/03/RU-45-Regulament-privindorganizarea-s%CC%A7i-desfa%CC%86s%CC%A7urarea-concursului-de-admitere-pentruanul-universitar-2021-2022.pdf>), updated every academic year, admission to the doctorate in USAMV CN is made according to the criteria: a) ½ the average graduation of the bachelor's or master's degree studies; b) ½ the grade obtained during the interview regarding research experience, motivation to be employed in doctoral studies, elaboration of a research project and testing of knowledge in the doctoral domain. To attract the best candidates, USAMVCN imposed selection criteria in addition to those provided by law, which include both graduation and bachelor's degrees and language skills. For the budgeted places the conditions are: the minimum average of 8.00 for the bachelor's degree and the minimum general average of 9.00 for the master's degree. For the presentation at the interview, the candidate fills in Annex B.1.2.1.a. Following the interview, the report Annex B.1.2.1.b, is completed and signed, which is handed in together with the Candidate Form to the doctoral school secretariat. Participation in the interview and elaboration of the candidate's file, which also contains the research project proposal, is based on the research topics put up for competition that are made public before admission on the doctoral school website: <https://www.usamvcluj.ro/invatamant/doctorat/>.

*Recommendations: No recommendations*



***The indicator is fulfilled.***

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

Referring to assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that the expulsion/dropout rate within the field of Engineering and Management in Agriculture and Rural Development, at 3 years from the date of registration does not exceed 30% for the evaluation period. From the seven students enrolled in the academic year 2018-2019, there is only one student dropping out which represents a total of 7.7% from the total enrolled 13 students within 2018-2020 period.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

The analysis of this criterion focuses on evaluating the appropriateness of the doctoral program in Engineering and Management to improve doctoral students' research skills and strengthen their ethical behavior in science.

*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.*

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- 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.
- 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.
- 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.
- All along the duration of the doctoral training, doctoral students receive counselling/guidance from functional guidance commissions.
- The ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.

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<sup>3</sup> 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No. 1/2011 with subsequent amendments and additions.





**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.*

Referring to assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained the training program based on advanced university studies of PhD students from SDSAI includes the following compulsory subjects common to all PhD students:

1. Principles of research methodology in plant and animal resource engineering
2. The methodology of writing the doctoral thesis
3. Scientific documentation
4. Elaboration of scientific papers, oral presentations, and posters
5. Design and management of research grants
6. Ethics and academic integrity

The types of activities (courses, seminars, practical works, project), the number of hours and credits allocated to each subject, the form of examination and the content of the subjects are available in Annex 9 and in Annex 10. The Subject of Principles of research methodology in plant and animal resources engineering also deals with the statistical processing of experimental data. Within this subject, the acquisition of knowledge and skills is ensured by solving the applications related to the theoretical methods presented in the course, the emphasis being on the correct choice of methods of statistical data analysis, processing, and interpretation of results. The deepening of the statistical methods of data analysis for the experiments is ensured within the applications solved and discussed in class, but also by assigning some topics during the semester. Thus, the assessment of knowledge is done both during class and during an exam. Apart from the Ethics subject, all other subjects are held by doctoral supervisors from SDSAI, with significant experience and great results in teaching and research.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

Referring to assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained the training program based on advanced university studies of PhD students from SDSAI includes the following compulsory subjects common to all PhD students:

1. Principles of research methodology in plant and animal resource engineering
2. The methodology of writing the doctoral thesis
3. Scientific documentation
4. Elaboration of scientific papers, oral presentations, and posters
5. Design and management of research grants
6. Ethics and academic integrity

The types of activities (courses, seminars, practical works, project), the number of hours and credits allocated to each subject, the form of examination and the content of the subjects are available in Annex 9 and in Annex 10. The PSUA SDSAI Curriculum contains the subject of Ethics and academic integrity,



which is a compulsory subject. Starting with the 2020-2021 academic year, SDSAI doctoral students can participate in the optional course Bioethics of Scientific Research, aiming to acquire theoretical knowledge and practical skills regarding the understanding and elaboration of ethical arguments in the field of scientific research. Among other things, legal aspects are addressed in research in the field of life sciences (animal experiments) as well as aspects of intellectual property ethics. Aspects of ethics and deontology in the elaboration of the doctoral thesis are also approached in the obligatory course of the Methodology of the elaboration of the doctoral thesis.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

***Performance Indicator B.2.1.3.*** *The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities<sup>4</sup>.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that through the subjects included in the training program of the advanced university studies in the doctoral domain of Engineering and Management in Agriculture and Rural Development, are ensured:

- Understanding the methods of critical analysis, evaluation and synthesis of new and complex ideas and their integration by complying with the rules of ethics and academic integrity in scientific work;
- Identification, description and appropriate use of scientific documentation platforms, electronic libraries and techniques for ordering documents and writing bibliography;
- Construction and use of methods and tools specific to scientific research in doctoral research in the domain of Engineering and Management in Agriculture and Rural Development, including statistical methods;
- Acquiring and consolidating knowledge on writing a scientific article, acquiring the knowledge necessary to design, write and publish scientific papers, designing oral presentations / posters, correctly citing sources, avoiding plagiarism and constantly pursuing academic honesty;
- Acquisition of theoretical knowledge and practical skills regarding the initiation, design, development, implementation and management of research grants
- Improving communication, leadership and self-assessment skills for PhD students;

By completing the training program based on advanced university studies, any doctoral student:

- will be able to use the fundamental research methods that are applied in the field of scientific research and will be able to interpret the results obtained critically and objectively;
- will be familiar with the fundamental requirements of writing a scientific paper (doctoral thesis, scientific articles, papers for international conferences) and the inclusion of elements of ethics and academic integrity in the scientific research activity carried out;

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<sup>4</sup> Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology of 17 March 2017 regarding inscription and registration of higher education qualifications in the National Register of Qualifications in Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.



- will understand the conceptual and methodological framework regarding the excellence in the research in the field, highlighting the critical factors, methods and techniques specific to this desideratum;
- will be able to develop an application for a research grant / project and will have the basics of project management.

The specific professional and transversal skills are highlighted in the subject descriptions included in the annual curricula of the SAI Doctoral School.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that during the entire doctoral training period, doctoral students in the domain of Engineering and Management in Agriculture and Rural Development benefit, in addition to the coordination provided by the scientific supervisor, from the advice / guidance of functional guidance commissions, established from the moment of doctoral students' enrollment and stipulated in the study contract., as evidenced in Annex B.2.1.4. The guidance committee consists of three members (academic staff and researchers, members of the research team of the doctoral supervisor, or collaborators affiliated to the doctoral school). The involvement of the guidance committee in advising doctoral students is in the form of written feedback and in regular meetings, at least once a year, completed by signing a report, which is part of the doctoral student's file. The activities of the guidance committee are complementary to those offered by the scientific doctoral supervisor.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

Referring to the assessed documents and the meetings/discussions held during the evaluation visit, it is ascertained that the guidance committee of the doctoral students consists of members specialized in the field as evidenced in Annex B.2.1.5. The 13 PhD students enrolled between 1.10.2018 and 30.9.2020 are guided by 6 distinct professors, most of whom are from USAMVCN. The ratio between the number of doctoral students and the number of members of the academic staff/researchers is 2.17, and does not exceed 3:1 ratio.

*Recommendations: The ratio is satisfactory for the accreditation period only. As in the other academic years 2020-2021, 2021-2022 there have been enrolled new students, the doctoral study domain*



may need to hire new teaching staff/researchers to provide the necessary doctoral guidance for the students.

**The indicator is fulfilled.**

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

The analysis of this criterion focuses on evaluating the standards fulfillment by the Institution related to:

- Doctoral students' capitalization on the research through presentations at scientific conferences, scientific publications, technological transfer, patents, products and service orders.
- The Doctoral School's engagement on a significant number of external scientific specialists in the commissions for public defense of doctoral theses in the analyzed domain.

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

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- At least 3 selected papers from doctoral students who has obtained a doctor's title within the past 5 years must contain significant original contributions in the respective domain.
- 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.

**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.*

This performance indicator is not applicable for the doctoral domain in Engineering and Management in Agriculture and Rural Development because the first admission competition was organized in the 2018-2019 academic year and there are no doctoral students who completed their doctoral studies in the evaluated period, in the last 5 years.

*Recommendations: No recommendations*

**The indicator is not applicable.**

**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.*

This performance indicator is not applicable for the doctoral domain in Engineering and Management in Agriculture and Rural Development because the first admission competition was organized in the 2018-2019 academic year and there are no doctoral students who completed their doctoral studies in the evaluated period, in the last 5 years.

*Recommendations: No recommendations*

***The indicator is not applicable.***

*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.*

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD.
- 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.

***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.***

This performance indicator is not applicable for the doctoral domain in Engineering and Management in Agriculture and Rural Development because the first admission competition was organized in the 2018-2019 academic year and there are no doctoral students who completed their doctoral studies in the evaluated period, in the last 5 years.

*Recommendations: No recommendations*

***The indicator is not applicable.***

***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.***



This performance indicator is not applicable for the doctoral domain in Engineering and Management in Agriculture and Rural Development because the first admission competition was organized in the 2018-2019 academic year and there are no doctoral students who completed their doctoral studies in the evaluated period, in the last 5 years.

*Recommendations: No recommendations*

***The indicator is not applicable.***

## ***Domain C. QUALITY MANAGEMENT***

The analysis of this domain on Quality Management focuses on evaluating the fulfillment by the Institution of the criteria related to:

- Existence and periodic implementation of the internal quality assurance system
- Transparency of information and accessibility of learning resources
- Internationalization

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

The analysis of this criterion focuses on evaluating the standards fulfillment by the Institution related to the existence of an institutional framework and procedures in place and relevant internal quality assurance policies, applied for monitoring the internal quality assurance.

*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.*

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- The Doctoral school 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.
- 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.

***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.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that IOSUD-USAMV CN has implemented and applied a procedure for evaluation and internal monitoring of the evolution of doctoral schools as reported in the Annex: PO-125, on criteria such as: the scientific activity of doctoral supervisors and doctoral students, the infrastructure and logistics necessary to carry out the research activity, as well as the procedures and rules for the organization of doctoral studies, the content of the doctoral program - analysis of results, learning, specific ways and tools to increase the competitiveness and visibility of doctoral students' research activity, including the use of financial resources for this purpose, along with other aspects specific to the activity of doctoral schools. Moreover, Annex C.1.1.1. provides information on the allocation of doctoral position which is based on the scientific performance of doctoral supervisors, based on the doctoral school analysis of the presentation sheets for doctoral supervisors. The annual evaluation of the activity for both doctoral supervisors and students is also accessible in the Intranet system. The structures responsible for monitoring internal quality assurance are the Commission for Evaluation and Quality Assurance at doctoral school level (CEACSD) and the Commission for Evaluation and Quality Assurance (CEAC) at university level, which also includes a representative of doctoral schools (<http://dac.usamvcluj.ro/responsabili.php>; <http://dac.usamvcluj.ro/consiliu.php>).

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that there are feedback mechanisms from doctoral students, that measure their degree of satisfaction with the doctoral study program. Doctoral students provide feedback to doctoral supervisors through regular meetings. PhD students assess the level of satisfaction with the learning environment by completing an online questionnaire through their institutional account at: Questionnaire for assessing the level of satisfaction with the learning environment: [https://docs.google.com/forms/d/e/1FAIpQLSczU8wQLp2yYJw6fTaU\\_BU3SaZlcHxy\\_E4G6rb8iGDz1R2M7g/viewform](https://docs.google.com/forms/d/e/1FAIpQLSczU8wQLp2yYJw6fTaU_BU3SaZlcHxy_E4G6rb8iGDz1R2M7g/viewform). Examples of the use for the analysis of satisfaction questionnaires to improve academic processes are reported in Annex C.1.1.2.



*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

The analysis of this criterion focuses on evaluating the standards fulfillment by the Institution related to:

- Information of interest to doctoral students, future candidates and public interest information is available for electronic format consultation.
- The IOSUD/The Doctoral School provides doctoral students with access to the resources needed for conducting doctoral studies.

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

This standard analysis focuses on evaluating the performance indicators fulfillment related to publication on the website of the organizing institution by IOSUD, in compliance with the general regulations on data protection, information such as: the Doctoral School regulation; the admission regulation; the doctoral studies contract; the study completion regulation including the procedure for the public presentation of the thesis; the content of training program based on advanced academic studies; the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data; the list of doctoral students within the domain with necessary information (year of registration; advisor); information on the standards for developing the doctoral thesis; links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented.

***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:***

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that the information of interest to doctoral students is available in electronic format on the respective website. Through the web page of the university ([www.usamvcluj.ro](http://www.usamvcluj.ro)), the web pages of the faculties, the web page of the Doctoral Schools (<https://www.usamvcluj.ro/invatamant/doctorat/>), the university offers information and data, which are either quantitative and / or qualitative, updated and correct, about the qualifications, study programs, diplomas, staff teaching and research, the facilities offered to students and other aspects of interest to the public in general and to students in particular. Also, all the decisions of the Board of Directors / Senate / CSUD are published there. Access to information of public interest is ensured, through the Center for Information and Institutional Transparency, which appears in the USAMV Cluj-Napoca organizational chart with the purpose of ensuring the free and unrestricted access of students to information of public interest <https://www.usamvcluj.ro/universitatea/documente-publice/443-2/>. The university publishes the fundamental documents on its website such as the University Charter, the Code of Ethics, the regulations in force, the annual reports, the financial resources, the acquisitions.





Regulations regarding the organization and development of doctoral studies, as well as other information of public interest are available on the website of the University <https://www.usamvcluj.ro/>, in compliance with personal data protection regulations as evidenced below, however some of the links are not functional:

- (a) the Doctoral School regulation; (The page below was not found)  
<https://www.usamvcluj.ro/wpcontent/uploads/2021/05/RU-65-Regulament-deorganizare-s%CC%A6i-funct%CC%A6ionare-al-S%CC%A6colii-Doctorale-de-S%CC%A6tiint%CC%A6e-Agricole50Ingineres%CC%A6ti.pdf>
- (b) the admission regulation;  
<https://www.usamvcluj.ro/wp-content/uploads/2020/06/RU-45-Regulament-privind-organizarea-s%CC%A7i-desfa%CC%86s%CC%A7urarea-concursului-de-admitere-pentru-anul-universitar-2020-2021.pdf>
- (c) the doctoral studies contract;  
<https://www.usamvcluj.ro/invatamant/doctorat/regulamente-proceduri-formulare/>
- (d) the study completion regulation including the procedure for the public presentation of the thesis;  
<https://www.usamvcluj.ro/wp-content/uploads/2021/05/RU-24A-Regulament-de-finalizare-a-studiilor-universitare-de-doctorat-la-IOSUD-USAMVCN-1.pdf>  
<https://www.usamvcluj.ro/wp-content/uploads/2020/04/Procedura-sustinere-teze-online.pdf>
- (e) the content of training program based on advanced academic studies; (The page below was not found)  
<https://www.usamvcluj.ro/invatamant/doctorat/fisediscipline/>
- (f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;  
<https://www.usamvcluj.ro/invatamant/doctorat/883-2/>
- (g) the list of doctoral students within the domain with necessary information (year of registration; advisor);  
<https://www.usamvcluj.ro/wp-content/uploads/2021/06/Evidenta-doctoranzi-conducatori.pdf>
- (h) information on the standards for developing the doctoral thesis; (The page below was not found)  
[https://www.usamvcluj.ro/wpcontent/uploads/2020/03/norme\\_redactionale\\_teza\\_de\\_doctorat-incepand-cu-2015.pdf](https://www.usamvcluj.ro/wpcontent/uploads/2020/03/norme_redactionale_teza_de_doctorat-incepand-cu-2015.pdf)
- (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.  
<https://www.usamvcluj.ro/invatamant/doctorat/sustineri-teze-de-doctorat/>

*Recommendations: The IOSUD should publish on the website of the organizing institution, in compliance with the general regulations on data protection all the required regulations and information.*

**The indicator is partially fulfilled.**

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

This standard analysis focuses on evaluating the performance indicators fulfillment related to:



- All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.
- 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.
- 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.

**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.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that through the ANELIS PLUS consortium (Association of Universities, Research and Development Institutes and Central University Libraries in Romania), all doctoral students have access to the electronic information and documentation resources. USAMV Cluj Napoca is a partner of the ANELIS + project <https://www.enformation.ro/>. All PhD students have free access to databases via the Internet (web interface), by authenticating the public IP addresses of the subscribing institution, 24 hours a day. Access to platforms is free and can be used outside the institution for users who have an account Information, or from their mobile as evidenced in Annex A.2.1.1.

*Recommendations: No recommendations*

**The indicator is fulfilled.**

**Performance Indicator C.2.2.2.** *Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that All PhD students from USAMVCN have access to the electronic system for verifying the degree of similarity sistemantiplagiat.ro (<https://sistemantiplagiat.ro/despre-sistem/>), available in the secretariat of the doctoral school.

*Recommendations: No recommendations*

**The indicator is fulfilled.**

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

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that all USAMCN PhD students have unrestricted access to the entire research infrastructure of the university, depending on the specifics of the field. The regulations of the Institute of Life Sciences (ISV) allow access to doctoral students and regulate the way in which doctoral students can carry out scientific research activities under the guidance of the doctoral supervisor or other members of the academic staff and researchers (Art. 3, Art. 7 paragraph 5) (RU 56). The ICHAT



Regulation (RU 57) establishes the conditions for the access of doctoral students in Art. 10; Article 36; Art.42. “PhD students, coordinated by doctoral teaching staff affiliated or not affiliated to ICHAT, can carry out their research activities as users of existing laboratories if they can finance their activity through scientific research projects, doctoral fund projects, through any financial sources that have the agreement of the ICHAT management and cover the costs under a contract”. The access of academic staff and doctoral students to the research infrastructure is also regulated by the operational procedure PO-124. The doctoral schools financially support the research activity of the students by allocating annually an amount of 2000 lei for reagents and material (Annex A.1.3.3.a). However, most of the material costs for PhD students' research activity are supported by the research projects they are involved in.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

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

The analysis of this criterion focuses on evaluating the standards fulfillment by the Institution related to the existence of a strategy in place and its application to enhance the internationalization of doctoral studies.

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

This standard analysis focuses on evaluating the performance indicators fulfillment related to:

- Mobility agreements concluded for the domain in Engineering and Management in Agriculture and Rural Development by IOSUD 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).
- 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.
- 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.).

***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.*



Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that there are international agreements with prestigious universities, partnerships, and affiliations to higher education associations, which carry out the extension of the forms of international cooperation, to increase the visibility and reputation of the involved universities. In this context, the strategy of the IOSUD focused on seeking international partners in both EU and non-EU countries. The University focuses its interest upon those higher education institutions with similar characteristics and with an investment in education, innovation and excellence that is attractive for the exchange of students, academic and research staff.

As evidenced in Annex C.3.1.1a, USAMVCN has international agreements with 38 universities abroad, most of them in the European Union. The institution encourages and supports mobility, both incoming and outgoing, in terms of students, but also teachers, researchers and staff of the University administration. USAMV Cluj-Napoca is a signatory to the Erasmus Charter and has concluded a number of 154 active agreements with 57 countries (including ERASMUS +): 109 ERASMUS + agreements with 21 EU countries and 45 ERASMUS + agreements with 25 non-EU countries (Annex C.3.1.1.b). Based on these agreements, there were mobilities, both of the doctoral students and of the teachers, from and in the University. Through the Office of the Vice Rector for International Relations, informs doctoral students and doctoral supervisors of all training opportunities through research internships offered through various international programs: Erasmus, DAAD, DBU, AUF, Marie Curie, Fulbright, and through bilateral programs established directly by USAMVCN with universities and research institutes around the world. The International Relations Office and the Erasmus Office provide logistical support for the administrative part (<https://www.usamvcluj.ro/relatii-internationale/alte-programeinternationale/>; <https://erasmus.usamvcluj.ro/>). In the period 2018-2019, 2 PhD students were enrolled in full-time education, one of whom completed an internship in scientific documentation at the Institut Supérieur d'Agriculture de Lille in France (Annex C.3.1.1.c). For PhD students enrolled in part-time education who are employed full-time by other employers, the availability of Erasmus mobility or training abroad is low. Due to the pandemic caused by the SARS-COV virus, the mobilities announced for 2020 at international conferences have been postponed (e.g. 47<sup>th</sup> International Conference of SSCHE in High Tatras, Slovakia, between May 25 and 28, 2020) or took place online (e.g. Innovations in Science and Education, CBU Research Institute, Prague, March 17<sup>th</sup>, 2020 - Annex B.3.1.2).

*Recommendations: Increasing the number of doctoral students participating at mobility periods abroad.*

***The indicator is partially fulfilled.***

***Performance Indicator C.3.1.2. In the evaluated doctoral study domain, support is granted, including financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.***

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that within the SAI doctoral school, in the domain of Engineering and Management in Agriculture and Rural Development:

- Assist. Prof. dr. Vesna Milovanović (Serbia);
- Prof. Dr. Simon Sándor (Ungaria);
- Prof. dr. Laszlo Robert Szemethy (Ungaria);



- Assoc. Prof. dr. hab. Wawrzyniec Czubak (Polonia);
- Prof. Dr. Rezhen Harun (Iraq);

were invited and gave lectures for doctoral students, within the ERASMUS program or through other types of exchanges as reported in Anexa C.3.1.2.

Prof. Dr. Mariantonietta Fiore held during the academic year 2020/2021 an optional course (4 hours) for all PhD students in IOSUD. At the time of submitting the report, there are no joint theses, but there are efforts to achieve them. The efforts towards stimulating internationalization are also proven by writing doctoral theses in English by 3 doctoral students: Eniko Kovacs, Diana Micle and Silvia Ureche.

*Recommendations: No recommendations*

***The indicator is fulfilled.***

***Performance Indicator C.3.1.3.*** *The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.).*

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that USAMVCN participated, in the period 2015-2020, in several international exhibitions and fairs, where it promoted the academic offer of the Doctoral School. Among these events, can be mentioned:

- NAFSA: Association of International Educators, May 26-31, 2019, Washington, USAMV Cluj-Napoca invited by the National Council of Rectors
- BMI Dubai International Academic Offers Fair, March 1-4, 2018
- International Education Fair "Education Abroad", April 19-22, 2018, Kiev
- The Romanian International University Fair, 2018, 2019 and 2020 editions, along with over 100 other universities from around the world.

In the domain of Engineering and Management in Agriculture and Rural Development it is intended to invite international experts as members of the commissions for public defense of doctoral theses written in English. Also, steps have been taken to co-opt the international experts in the guidance committee for the future doctoral students.

*Recommendations: Increase participation in educational fairs to attract international doctoral students and include international experts in guidance committees or doctoral committees.*

***The indicator is partially fulfilled.***



## IV. SWOT Analysis

<p><b><u>Strengths:</u></b></p> <ul style="list-style-type: none"><li>-study domain leadership;</li><li>-study domain staff dedication;</li><li>-study domain staff quality;</li><li>-modern infrastructure;</li><li>-reach library;</li></ul>	<p><b><u>Weaknesses:</u></b></p> <ul style="list-style-type: none"><li>-low internationalization;</li><li>-no students participating at mobility periods abroad</li></ul>
<p><b><u>Opportunities:</u></b></p> <ul style="list-style-type: none"><li>- internationalization opportunities of the program through the institutional agreements;</li><li>-enrolling students financed by state funds put out through contest</li></ul>	<p><b><u>Threats:</u></b></p> <ul style="list-style-type: none"><li>-low number of companies in the region;</li><li>-low awareness of the region companies on developing new innovative ways of engineering</li></ul>

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

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
1.	PI	<p><b>A.1.1.1.</b> 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> <p>g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.</p>	Fulfilled	
2.	PI	<p><b>A.1.1.2.</b> 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.</p>	Fulfilled	
3.	PI	<p><b>A.1.2.1.</b> The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.</p>	Fulfilled	
4.	PI	<p><b>A.1.2.2.</b> The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.</p>	Fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
5.	IP	<p><b>A.1.3.1.</b> 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.</p>	Fulfilled	
6.	PI *	<p><b>A.1.3.2.</b> 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%.</p>	Fulfilled	
7.	PI *	<p><b>A.1.3.3.</b> 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.).</p>	Fulfilled	
8.	CPI	<p><b>A.2.1.1.</b> 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</p>	Fulfilled	



No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		developed within the past 5 years will be presented distinctly		
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.	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 functions, as provided by the law.	Fulfilled	
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%.	Partially Fulfilled	The study domain should increase the number of doctoral thesis advisors.
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	Fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.		
14.	PI *	<b>A.3.2.2.</b> 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	<b>Fulfilled</b>	
15.	PI *	<b>B.1.1.1.</b> 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.	<b>Fulfilled</b>	
16.	PI *	<b>B.1.2.1.</b> 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.	<b>Fulfilled</b>	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		Interviewing the candidate is compulsory, as part of the admission procedure.		
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	
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	The ratio is satisfactory for the accreditation period only. As in the other academic years 2020-2021, 2021-2022 there have been enrolled new students, the doctoral study domain may need to hire new teaching staff/researchers to provide the necessary doctoral guidance for the students.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
23.	CPI	<b>B.3.1.1.</b> 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	NA	
24.	PI *	<b>B.3.1.2.</b> 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.	NA	
25.	PI *	<b>B.3.2.1.</b> 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.	NA	
26.	PI *	<b>B.3.2.2.</b> 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.	NA	
27.	PI	<b>C.1.1.1.</b> 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	Fulfilled	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<p>the level of the IOSUD, the following assessed criteria being mandatory:</p> <ul style="list-style-type: none"> <li>a) the scientific work of Doctoral advisors;</li> <li>b) the infrastructure and logistics necessary to carry out the research activity;</li> <li>c) the procedures and subsequent rules based on which doctoral studies are organized;</li> <li>d) the scientific activity of doctoral students;</li> <li>e) the training program based on advanced academic studies of doctoral students;</li> <li>f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.</li> </ul>		
28.	PI *	<p><b>C.1.1.2.</b> 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>	<b>Fulfilled</b>	
29.	CPI	<p><b>C.2.1.1.</b> 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"> <li>a) the Doctoral School regulation;</li> <li>b) the admission regulation;</li> <li>c) the doctoral studies contract;</li> <li>d) the study completion regulation including the procedure for the public presentation of the thesis;</li> <li>e) the content of training program based on advanced academic studies;</li> <li>f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;</li> <li>g) the list of doctoral students within the domain with necessary information (year of registration; advisor);</li> <li>h) information on the standards for developing the doctoral thesis;</li> <li>i) links to the doctoral theses' summaries to be publicly presented and the date, time, place</li> </ul>	<b>Partially Fulfilled</b>	<p><b>The IOSUD should publish all the required information on the website of the organizing institution.</b></p>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		where they will be presented; this information will be communicated at least twenty days before the presentation.		
30.	PI	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.	Fulfilled	
31.	PI	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.	Fulfilled	
32.	PI	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.	Fulfilled	
33.	PI *	C.3.1.1. IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study, aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.	Partially Fulfilled	Increasing the number of doctoral students participating at mobility periods abroad.
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;	Partially Fulfilled	Increase participation in educational fairs to attract international doctoral students and include international experts in guidance committees or doctoral committees.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		by including international experts in guidance committees or doctoral committees etc.).		

## VI. Conclusions and general recommendations

The doctoral university studies are organized by IOSUD within USAMVCN in accordance with the National Education Law No 1/2011, Government Decision No 681/2011 on the approval of the Code of doctoral studies and the Institutional Regulation for the organization and development of doctoral studies. The doctoral study domain in Engineering and Management in Agriculture and Rural Development was established in 2018. The evolution of the number of enrolled doctoral students reflects a consistency with 7 students enrolled in the academic year 2018-2019 and 6 students in 2019-2020, meanwhile there are not yet graduated any of the enrolled students. In this study domain there are four doctoral advisors who at the same time have a full-time employment contract for an indefinite period with the IOSUD.

Referring to the assessed Institution's documents and the meetings/discussions held during the evaluation visit, it is ascertained that:

- in order to support the successful development of teaching and research activities of this doctoral field IOSUD has the adequate:
- administrative, managerial institutional structures and the financial resources related to:
  - o the implementation of an effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies,
  - o the possession of logistical resources necessary to carry out the doctoral studies' mission,
  - o optimal usage of financial resources.
- research infrastructure referring to:
  - o the venues and the material equipment available to enable the research activities in the domain.
- quality of human resources such as:
  - o sufficient qualified staff to ensure the conduct of doctoral study program,
  - o visible scientific activity at international level carried by the doctoral advisors.
- content of doctoral programs attributing to:
  - o a training program based on advanced academic studies,
  - o mechanisms to ensure that the academic training program is based on advanced university studies addressing „the learning outcomes”, specifying the knowledge, skills, responsibility, and autonomy that doctoral students should acquire after completing each discipline or through the research activities,
  - o providing necessary counselling/guidance from functional guidance commissions to doctoral students all along the duration of the doctoral training,
- periodic implementation of the internal quality assurance system related to:
  - o a continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD,
  - o implemented mechanisms to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program,
- transparency of information and accessibility of learning resources referring to:



- availability in electronic format consultation on information of interest to doctoral students, future candidates, and public interest,
- access to the resources needed for conducting doctoral studies to students.

However, there are evidenced needs of improvement related to:

- (i) Internationalization.

To overcome these weaknesses, it is recommended to the study program to:

- (i) Increasing the number of doctoral students participating at mobility periods abroad.
- (ii) Increase participation in educational fairs to attract international doctoral students as well as include international experts in guidance committees or doctoral committees.





## **VII. Annexes**

- *Annex 1: The detailed schedule of the evaluation visit.*