

The External Evaluation Report of a Doctoral Study Domain

Contents

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

I. Introduction¹

In this chapter, the following shall be summarized:

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

II. Methods used

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

- The analysis of the internal evaluation report of the doctoral study domain under review and its Annexes;
- The analysis of documents made available by the IOSUD, in physical format, during the evaluation visit (if such documents have been requested);
- The analysis of documents, data and information available on the IOSUD/Doctoral School(s) website, in electronic format;
- Visiting the buildings included in the institution's property, comprising (indicative and non-exhaustive list, which shall be changed according to the context):
 - classrooms;
 - laboratories;
 - the institution's library;
 - research centers;
 - the Career Counselling and Guidance Center;
 - lecture halls for students;
 - the student residences;

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



- the student cafeteria;
- sports ground etc.;
- Meeting/discussions with doctoral students in the doctoral study domain under review;
- Meeting/Discussions with the graduates of the doctoral study domain under review;
- Meeting/Discussions with employers of the graduates in the doctoral study domain under review;
- Meeting/Discussions with the school officials of the Doctoral School(s) in which the doctoral study domain under review is operating;
- Meeting/Discussions with the doctoral advisors in the doctoral study domain under review;
- Meeting/discussions with the representatives of the various structures of the IOSUD/Doctoral School(s) in which the doctoral study domain under review is operating:
 - The Council of the Doctoral School, the University Senate, the Board of Directors, the Quality Assessment and Assurance Commission, the Quality Assurance Department, the Ethics Commission (including with the student representatives of these structures);
 - the Career Counselling and Guidance Center;
 - student organizations;
 - secretariats;
 - various departments/administrative offices (Social/Student residences-Cafeterias etc.);
- Application of questionnaires to doctoral students or academic staff in the doctoral study domain under review.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

This domain analyzes the institutional capacity according to three important criteria: administrative, and financial resources, research infrastructures and quality of human resource.

In administrative terms, the Doctoral School has implemented mechanisms provided for in the specific legislation on the organization of doctoral studies and IT systems which are effectively implemented. In relation to the financial resources, doctoral program appears to have governmental funding as well as additional supports, although these funding should be increase; in consequence measures are needed to try to recover them.

In relation to the research infrastructure, in general terms, laboratory equipments, databases, softwares, computers, and another materials available for PhD students, so they are considered enough to the research developed by PhD students.



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

The Doctoral School has implemented mechanisms provided in the specific legislation on the organization of doctoral studies which are effectively implemented, as well as a IT system to keep track of doctoral students and their academic background; finally PhD supervisors have the possibility to use a software to verify the percente of similarity in doctoral theses. So it is possible conclude that there are appropriate mechanisms provided for administrative management. Finally, in relation to the financial resources, doctoral program appears to have governmental funding as well as some additional supports from public projects, however measures are needed to increase funding, specially from research project and private companies with activity related with the studies. The increase of fundes could be use to reimburse professional training expenses of doctoral students to attend conferences, summer schools, training, programs abroad, or increase the publication of specialty papers; these measures could have important benefits in other indicators, for example to improve international visibility or quality of staff. In this sense, public+Private collaboration is necessary to develop research and transfer results to society.

Standard A.1.1. The institution organizing doctoral studies (IOSUD) has implemented the effective functioning mechanisms provided for in the specific legislation on the organization of doctoral studies.

The standard related with the organization of doctoral studies has been performed by two indicators. In general terms the institution has internal regulations which are effectively implemented, so it is possible conclude that there are mechanisms provided for administrative management.

Performance Indicator A.1.1.1. *The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:*

- (a) the internal regulations of the Doctoral School;*
- (b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;*
- c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);*
- d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;*
- e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;*
- f) the contract for doctoral studies;*
- g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.*
 - analysis of the facts, the findings from the assessed institution's documents and the evaluation visit itself*

Specific regulations and their application at the level of the doctoral school, of which the domain is part, exists, including in Annexes or in website: the internal regulations of the Doctoral School, the



methodology for conducting elections for Council of doctoral school (director and students) and evidences of these elections, methodologies for organizing and conduction doctoral studies, functional management structures, the contract for doctoral studies and internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs. Evidences of the sesions have been included.

Recommendations:

The indicator is fulfilled

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

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

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

The regulation of the Doctoral School of Applied Sciences was drawn up in compliance with the provisions of article 17 of the Code of Doctoral Studines, as amended by HG 134/2016, including: specific references to the acceptance of new members being doctoral coordinators, the mechanisms through which decisions are taken regarding the opportunity, structure and content of the training program, the conditions for changing the doctoral supervisor and the conflict mediation procedures, the conditions under which the doctoral program may be interrupted, the modalities for the prevencion of fraud in the scientific research, modalities which provide and ensure access to the research resources, and the attendance obligations of doctoral students.

Recommendations:

The indicator is fulfilled.

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

The IOSUD has an appropriate IT system to keep track of doctoral students and their academic background as well as software program available to all PhD supervisors to verify the percentage of similarity in doctoral theses. Evidences of their use have been reported. In consequence, it is possible conclude that the IOSUD has the logistical resources necessary to carry out the doctoral studies mission. *track of doctoral students and their academic background.*

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

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



In the 2018/2019 academic year, a doctoral module of the integrated UMS student management system was provided by Red Point. This module manage academic information of doctoral students easily and it has a specific tool compared to the students/situations module visible for the doctoral study cycles. It includes information as: doctoral thesis, reports, activities carried out, the situation of doctoral students, etc. Evidences of this tool have been reported.

Recommendations:

The indicator is fulfilled.

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

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

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

It has been implemented a system of verifying the originality of theses and scientific works developed by PhD students through the electronic comparison of documents offered by the Plagiarism-detector. Each doctoral supervisor starts from the sequence of similarities identified by the program and decides on the existence or not of unauthorized loans, and a similarity report is reported. Five doctoral theses were completed during the evaluated period and all of them were verified with this system. Evidences of its application have been reported.

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 includes three indicators, one of them has been classified as fulfilled and the other two as partially fulfilled. Doctoral program appears to have governmental funding as well as some additional supports from projects, nevertheless, measures are needed to increase funding, specially from research project and private companies with activity related with the studies. Besides, some efforts should be developed to reimburse professional training expenses of doctoral students to attend conferences, summer schools, training, programs abroad, or increase the publication of specialty papers. In this sense, public+Private collaboration is necessary to develop research and transfer results to society.

Performance Indicator A.1.3.1. *Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.*



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

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

Five projects have been reported in the field of Civil Engineering and Installations

Recommendations:

The indicator is fulfilled.

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

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

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

Recommendations:

2 doctoral students have been benefited from scholarships. Taking into account that the number of students during the evaluation period was 18, so 11,1% of doctoral students have received additional funding sources through scholarships awarded by individual persons or by legal entities. This number is lower than the minimum established (20%).

The indicator partially fulfilled.

Performance Indicator *A.1.3.3.² *At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).*

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

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

In only 1 year the PhD students had expenses for being supported; specifically, in 2019 3 PhD students obtained financial support from the Doctoral School budget to participate with works at an international scientific event organized in Tunisia. Although the report explains that the total amount

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



allocated was 11818,32 lei, representing 10.85% of the budget of the Doctoral School of Applied Sciences, the correct value is 8.68% from the total value as 20% is going to the university, and only 80% stays at the doctoral school.

Recommendations:

The indicator is partially fulfilled.

Criterion A.2. Research infrastructure

Guidelines includes in criteria one indicator and one standard that quantify the research infrastructure to support the conduct of doctoral activities. The indicators is fulfilled meaning that, in general terms, the Research Center “Civil Engineering” of the Faculty of Construction has laboratory equipments, databases, softwares, computers, and another materials available for PhD students and teachers.

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

In general terms, the Research Center “Civil Engineering” of the Faculty of Construction has laboratory equipments, databases, softwares, computers, and another materials available for PhD students and teachers.

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

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

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

PhD students can carry out their research activities within the Research Center “Civil Engineering” of the Faculty of Construction. Teachers and students have explained that research infrastructures are modern and support the conduct of doctoral activities.

Recommendations:

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

This criterion includes two standards, both of them with the objective to identify if the staff that collaborate in the domain is sufficient qualified to ensure the conduct of doctoral study program. In general terms it has been possible conclude that the number of PhD advisors with the the CNATDCU habilitation



and working at full-time and with indefinite contract, is not enough; in fact the higher number of retired PhD supervisors, and the low international visibility, have become evident the shortage of increasing the number and qualification of PhD advisors. Finally, it has been possible to conclude that the scientific activity visible at international level should be improved. In consequence, 1 of the indicators has been considered not fulfilled, another one partially fulfilled, and 4 of them fulfilled, so it is necessary to make an effort to work to increase the number of PhD advisors, as well as their qualification, because the domain could be in danger of not having qualified supervisors in a short period of time.

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 includes four indicators. Their evaluation has shown that 2 of them could be considered fulfilled, 1 not fulfilled, and the other one is partially fulfilled. The number of PhD advisors included in the field could be considered enough because the number of students is a little low; however, in relation to the qualification of staff, only 2 supervisors have the CNATDCU habilitation and full-time and indefinite contract. In fact three of the supervisors are retired, so in future there could be there problems to supervise to the students. In consequence it is necessary to make an effort to increase the number of PhD advisors habilitated.

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

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

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

The number of doctoral thesis advisor within that doctoral domain is 5. 2 of them meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates now, representing 40% of them. This indicator is near to be fulfilled but it can not be considered completely fulfilled.

Recommendations:

The indicator is partially fulfilled.

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

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

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



The number of doctoral thesis advisor within that doctoral domain is 5. 2 of them have a full-time employment contract for an indefinite period with the IOSUD; the rest of them are retired. This number of full-time employment doctoral thesis advisor represents 40% of them. In consequence, this indicator is can not be considered fulfilled.

Recommendations:

The indicator is not fulfilled.

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

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

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

The training program includes a high number of disciplines, almost all of them based on advanced university studies related to the field and they are supported by teachers and researchers with a high qualification and proven expertise in the field.

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 programs³ does not exceed 20%.*

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

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

The total number of doctoral students distributed to each doctoral supervisor varies between 1 and 5, so no doctoral supervisor has more that 8 doctoral students.

Recommendations:

The indicator is fulfilled.

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



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

This standards includes two indicators, and both of them has been considered fulfilled. However the doctoral advisors withing the domain have to make an effort to make their scientific activity more visible at international level. These will make easier to increase the number of supervisors who has the CNATDCU habilitation.

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

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

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

The number of doctoral thesis advisor within that doctoral doamin is 5 and 3 of them have justified, 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. However, a list of papers including contributions of two more thesis advisors has been sent, so finally 60% of the doctoral thesis advisors in the evaluated domain have, at least 5 indexed publications. Besides, 3 of them 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.

Recommendations:

The indicator 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.*



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

The number of doctoral thesis advisor within that doctoral domain is 5. Two of them 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. It represents only 40% of the doctoral thesis advisors in this specific doctoral study domain. Besides, in the case of three of them, evidences about their activity in the scientific field have been included in Annex 3.2.1; this value represents 60% of the doctoral thesis advisors.

Recommendations:

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

This domain evaluates the number, quality and diversity of candidates enrolled for the admission contest, the content of doctoral programs and the results of their studies and procedures for their evaluation. To do that three criteria have been considered using for this 12 indicators classified in 3 criteria. It is important to highlight that indicator B.3.2.2. is not applicable and that the rest of indicators have been classified as fulfilled.

A general admission to doctoral study programs is well defined and applied showing the capacity to attract candidates from outside the higher education institution, in fact it has improved the last year. The training program is well designed, including an obligatory subject about ethics and academic integrity and another subjects to study in-depth the research methodology and modelling tools, as well as specific technical courses in the domain. As result the expelling rate does not exceed the limit established and invalidated theses during the evaluation period have not been detected. Nevertheless, the ration between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance and the conunselling/guidance from functional guidance commissions, have not been discussed. Finally results of doctoral studies have been justified through scientific contributions including papers and conferences, making possible knowledge transfer to scientific community.

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

The criterion about the number, quality and diversity of candidates enrolled for the admission contest have been evaluated with three indicators, according to two standars. In general terms, the program has the capacity to attract candidates from outside the higher education institution, although some efforts to catch international students should be developed. Besides, a general admission to



doctoral study programs is well defined and applied and expelling rate does not exceed the limit established.

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 only includes one indicator, the ratio between the number of graduates of masters' of other higher education institutions and the number of seats. The ratio has been higher than the limit value.

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

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

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

The last five years, the number of candidates registered for a number of places financed from the state has been risen to 18 and 6 of them were from another masters' programs of other higher national education institutions, representing a ratio of 0.3, higher than the minimum established.

Recommendations:

The indicator is fulfilled.

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

The standards about the candidates admitted to doctoral studies and their performance are evaluated with two indicators. A general admission to doctoral study programs is well defined and applied and expelling rate does not exceed 30% of admitted students, so both indicators are considered fulfilled.

Performance Indicator *B.1.2.1. *Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.*

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



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

According with the information published in website, the admission to the field is made through an interview with the candidate, taking into account previous professional performance, interest in scientific research, publications in the field and a research topic proposal. Evidences about this selection have been included.

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 admission⁴ does not exceed 30%.*

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

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

The number of years that student need are higher than 3 because most of them are working, however the average dropout rate calculated for the last 5 years does not exceed 30%.

Recommendations:

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

The criterion about the content of doctoral programs is evaluated with five indicators, included in only one standard that describes the training program. In general terms the training program is well designed, including an obligatory subject about ethics and academic integrity to study in-depth the research methodology and modelling tools, as well as specific technical courses in the domain. Besides, the ration between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance and the conunselling/guidance from functional guidance commissions is appropriate.

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

The standard about the training program is evaluated according to 5 indicators, all of them considered fulfilled. In general terms the training program is well designed; it describes skills, knowledge, responsibility and autonomy that doctoral students should acquire, and it includes an obligatory subject about ethics and academic integrity to study in-depth the research methodology and modelling tools, as well as specific technical courses in the domain. Besides, the ration between the number of doctoral

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



students and the number of teaching staff/researchers providing doctoral guidance and the conunselling/guidance from functional guidance commissions is according the specified limit.

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

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

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

The training program present different disciplines included in one of three categories: imposed, optional and complementary. More than 3 disciplines are relevant to the scientific research training of doctoral students. They are designed to prepare highly trained human resources by acquiring advanced knowledge, skills and abilities of sciencific research in the field of civil engineering. The training program is based on advances university studies to study in-depth the research methodology and/or the statistical data processing.

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.*

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

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

The training program includes a compulsory subject of 4 credits about ethic and academic integrity.

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 activities⁵.*

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

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



visit itself

Annex B.2.1.3 includes the guide of disciplines including the description of programs as well as knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each one. The evaluation system is also included.

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.

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

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

Doctoral students in the field benefit from the guidance of functional guidance commissions through regular meetings with the members of the commissions and a progress reports of PhD students are prepared. Annex B.2.1.4 shows an example of this report.

Recommendations:

The indicator is fulfilled.

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

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

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

The ratio between the number of doctoral students and the number of teachers providing guidance is 0.89, a lower value than the limit established.

Recommendations:

The indicator is fulfilled.

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

This criterion describes the results of doctoral studies through presentations at scientific conferences, and publications. To do that four indicators organized in two standards are included in guidelines and classified as fulfilled, except one of them (B.3.2.2) which is not applicable. They have shown enough scientific contributions including papers and conferences making possible knowledge transfer to scientific



community. Besides a contribution of external referents from another higher education institution and significant number of external scientific specialist in the commissions for public defense of doctoral theses have been justified, according to the limit established.

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 includes two indicators that have shown appropriate mechanisms to publish scientific contributions including papers and conferences. The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period and the number of doctoral students who have completed their doctoral studies within the evaluated period is according to the limit established.

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

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

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

Annex B.3.1.1 summarizes scientific production of 9 students, all of them with more than one relevant contribution.

Recommendations:

The indicator is fulfilled.

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

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

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

Annex B.3.1.2 summarizes the list of scientific communications and internal events. The ratio between the number of presentations and the number of doctoral students who completed their doctoral studies is 2.28, a value higher than the minimum established (1).

Recommendations:

The indicator is fulfilled.



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

This standard includes two indicators to be evaluated; one of them has been classified as fulfilled and the other one is not applicable. In general terms they have shown that the Doctoral School engages a significant number of external scientific specialists in the commissions for public defense of doctoral theses, according to the national legislation.

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

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

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

Annex B.3.2.1 shows the doctoral theses defended per academic years. In the academic years 2015/2016, 2016/2017 and 2019/2020 7 doctoral theses were defended and the number of doctoral theses assigned to a 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.

Recommendations:

The indicator is fulfilled.

Performance Indicator *B.3.2.2. *The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.*

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

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

It is not applicable because the number of theses defended during the evaluation period has been 7, lower than the minimum established (10).

Recommendations:

The indicator is not applicable

Domain C. QUALITY MANAGEMENT



The evaluation of the domain related with the quality management includes 3 criteria and 9 indicators, classified according to 4 standards. In general terms it has been possible to conclude the existence and implementation of the internal quality assurance system. Important efforts to enhance the internationalization of doctoral studies should be implemented; it could be well received because it could have positive effects in other indicators, for example number of publications, CV of PhD supervisors, number of international candidates, and funds.

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

The existence and implementation of the internal quality assurance system has been evaluated by two indicators included in one standard and classified as fulfilled. Results of the evaluation have shown that, in general terms, there are implemented tools to evaluate program quality as well as to develop strategies and policy of action in order to remedy the deficiencies reported and to stimulate the scientific and academic performance.

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

The standard includes two indicators that have shown that, in general terms, there are implemented tools to evaluate program quality as well as to develop strategies and policy of action in order to remedy the deficiencies reported and to stimulate the scientific and academic performance.

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

- (a) the scientific work of Doctoral advisors;*
- (b) the infrastructure and logistics necessary to carry out the research activity;*
- (c) the procedures and subsequent rules based on which doctoral studies are organized;*
- (d) the scientific activity of doctoral students;*
- (e) the training program based on advanced academic studies of doctoral students;*
- (f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.*

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

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

The Doctoral school in the civil engineering study domain have demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the program. Website publish regulation and procedure and the evaluation sheets including the mandatory criteria have been included in different annexes.

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.*

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

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

Every year, doctoral students are consulted using a questionnaire method to know about demographic data, identification, contact, efficiency of study programs, assessments regarding the graduated specialization, the quality of the academic and administrative services and the degree of satisfaction with the doctoral field. Annex C.1.1.2 shows results in the form of a narrative report, illustrated with graphs.

Recommendations:

The indicator is fulfilled.

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

This criterion includes two standard and four indicators which evaluate the transparency of information and accessibility of learning resources (relevant academic data base, verification of degree of similarity application and access to laboratories). All the indicators have been considered fulfilled.

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

This standard includes only an indicator that evaluate the website of the institution that includes information about the program. Although nowadays website is not the prefer way to get information by the students, it is important to give information about the results of the program. It is in English, so it is positive to attract students from abroad.

Performance Indicator C.2.1.1. *The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:*

(a) *the Doctoral School regulation;*

(b) *the admission regulation;*

(c) *the doctoral studies contract;*

(d) *the study completion regulation including the procedure for the public presentation of the thesis;*

(e) *the content of training program based on advanced academic studies;*

(f) *the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;*



(g) the list of doctoral students within the domain with necessary information (year of registration; advisor);

(h) information on the standards for developing the doctoral thesis;

(i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.

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

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

General information about the doctoral program is included in website.

Recommendations:

The indicator is fulfilled.

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

In general terms, doctoral students have access to the resources needed for conducting doctoral studies, including laboratories, research spaces as well as academic databases and tools to develop their research work according to ethical codes. The three indicators included for this standard have been considered as fulfilled.

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

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

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

All PhD students have access to scientific research laboratories and other facilities depending on the specifics of the field. UOC is a member and has access to several databases so students can have free access to them.

Recommendations:

The indicator is fulfilled.

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

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

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



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 using a application form published in website.

Recommendations:

The indicator is fulfilled.

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

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

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

All the doctoral students have access to the material base of the UOC, of the Faculty of Constructions, at the "Ion Popisteanu" University Library, research and documentatino centers, material base and patrimony. The access of doctoral students in the research laboratorios and the facilities is allowed without restrictions for the achievement of the objectives proposed in the doctoral program. Graduates have valorated positively this opportunity.

Recommendations:

The indicator is fulfilled.

Criterion C.3. Internationalization

This criterion includes only one standard which, in turn, includes three indicators to evaluate internationalization of doctoral studies strategy; all of them have been considered partially fulfilled. In general terms, important efforts to enhance the internationalization of doctoral studies have been developed, including some agreements with universities that have resulted in some mobilities, participation of international doctors to support doctoral studies or the organization of international events. However it is necessary to make an effort to increase the number of agreements to increase the number of students that visit international universities to develop part of the phd thesis, to carry out activities during the doctoral studies, or to push co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.

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

them have been considered partially fulfilled. In general terms, important efforts to enhance the internationalization of doctoral studies have been developed, including some agreements with universities that have resulted in some mobilities, participation of international doctors to support doctoral studies or the organization of international events. However, it is necessary to make an effort to increase the number of agreements as a way to increase the number of students that visit international universities to develop



part of the phd thesis, to carry out activities during the doctoral studies, or to push co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.

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

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

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

The evaluated field of study has signed mobility agreements with foreign universities; however, the number of doctoral students that have completed a training course abroad or other mobility forms such as attending international scientific conferences is only 3, representing 16.7%, a lower value than the minimum established (35%).

Recommendations:

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.*

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

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

An international conference has been organized to which the doctoral students also participated and they also have the opportunity to attend a course given, in part, by a professor from a foreign school. However international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students have not included.

Recommendations:

The indicator is partially fulfilled.

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



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

A list of 10 international fairs (educational fairs) were members of the doctoral study program have participated, however none of them are including as international experts in guidance committees or doctoral committees.

Recommendations:
The indicator is partially fulfilled.

IV. SWOT Analysis

<p><u>Strengths:</u></p> <ul style="list-style-type: none"> • The institution organizing doctoral studies has an administrative managerial institutional structures and financial resources. • Modern research infraestructure to support the conduct of doctoral studies specific activities. • According to the characteristics of the domain, the number, quality and diversity of candidates enrolled for admission could be considered suitable. • A training program based on advanced university studies and appropriate to improve doctoral students' research skills and to strengthen ethical behavior in science. • International diffusion of doctoral studies results. • Existence of an appropriate implementation of an internal quality assurance system. • Transparency of information and accessibility of learning resources. 	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none"> • Low number of qualified staff to ensure the conduct of doctoral study program. • Low scientific activity visibility of doctoral advisors at international level. • Low mobility of doctoral students and academic staff.
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> • ERASMUS program agreements for the doctoral studies with important universities. • Potential candidates that could fulfill with minimal CNATDCU standars in a short term. • Potential agreements with civil engineering companies for researching. 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> • Reduction of doctoral students because of more attractive job offers in civil engineering companies. • Do not have capacity to recruit qualified staff to be doctoral advisor and teacher in the domain.

1.	PI	<p>A.1.1.1. The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:</p> <p>a) the internal regulations of the Doctoral School;</p> <p>b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;</p> <p>c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);</p> <p>d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;</p> <p>e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;</p> <p>f) the contract for doctoral studies;</p> <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	No recommendations
2.	PI	<p>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.</p>	Fulfilled	No recommendations
3.	PI	<p>A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.</p>	Fulfilled	No recommendations
4.	PI	<p>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.</p>	Fulfilled	No recommendations

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
5.	IP	<p>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.</p>	Fulfilled	To increase additional funding besides governmental funding from research projects and collaborations with private companies.
6.	PI *	<p>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%.</p>	Partially fulfilled	To develop researches in collaboration with private companies to towards attracting talent rather than simply bemoaning the exodus of talent to professional sector.
7.	PI *	<p>A.1.3.3. At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).</p>	Partially fulfilled	It is necessary to increase funds to increase doctoral grants as well as to reimburse professional training expenses of doctoral students. Collaboration with professional institutions could be a good option to get funds and also to develop applicable researches.
8.	CPI	<p>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</p>	Fulfilled	No recommendations

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.	Partially fulfilled	To collaborate with another universities and companies to towards attracting researchers to the doctoral program
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.	Not fulfilled	To collaborate with another universities and companies to towards attracting researchers to the doctoral program
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	No recommendations
12.	PI *	A.3.1.4. The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs does not exceed 20%.	Fulfilled	No recommendations
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	Although it could be considered fulfilled, it is necessary to to increase international papers publication.

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 *	A.3.2.2. At least 50% of the doctoral thesis advisors in a specific doctoral study domain continue to be active in their scientific field, and acquire at least 25% of the score requested by the minimal CNATDCU standards in force at the time of the evaluation, which are required and mandatory for acquiring their enabling certificate, based on their scientific results within the past five years	Fulfilled	Although it could be considered fulfilled, it is necessary to to increase international papers and research projects. Take advantage of ERASMUS agreement to collaborate with researchers could be an option.
15.	PI *	B.1.1.1. The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.	Fulfilled	No recommendations
16.	PI *	B.1.2.1. Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject.	Fulfilled	No recommendations

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	No recommendations
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	No recommendations
19.	PI	B.2.1.2. At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.	Fulfilled	No recommendations
20.	PI	B.2.1.3. The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities.	Fulfilled	No recommendations
21.	PI	B.2.1.4. All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.	Fulfilled	No recommendations
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	No recommendations
23.	CPI	B.3.1.1. For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5	Fulfilled	No recommendations

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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		
24.	PI *	B.3.1.2. The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.	Fulfilled	No recommendations
25.	PI *	B.3.2.1. The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.	Fulfilled	No recommendations
26.	PI *	B.3.2.2. The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.	Not applicable	Not applicable
27.	PI	C.1.1.1. The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory: a) the scientific work of Doctoral advisors; b) the infrastructure and logistics necessary to carry out the research activity;	Fulfilled	No recommendations

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		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.		
28.	PI *	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.	Fulfilled	No recommendations
29.	CPI	C.2.1.1. The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as: a) the Doctoral School regulation; b) the admission regulation; c) the doctoral studies contract; d) the study completion regulation including the procedure for the public presentation of the thesis; e) the content of training program based on advanced academic studies; f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data; g) the list of doctoral students within the domain with necessary information (year of registration; advisor); h) information on the standards for developing the doctoral thesis; i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.	Fulfilled	No recommendations

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
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	No recommendations
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	No recommendations
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	No recommendations
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	To develop program and increase scholarships to improve international mobility
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.	Partially fulfilled	It is necessary to make effort to increase the financial support to the organization of international activities for doctoral students.
35.	PI	C.3.1.3. The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.).	Partially fulfilled	It is necessary to make effort to increase the organization of international activities for doctoral students.



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

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

V. Conclusions and general recommendations

The doctoral program shows important strengths that which results in a high number of candidates enrolled for the admission contest and that will support the program the next years. Some of them are related with a suitable implementation of administrative mechanisms to manage the program as well as internal quality assurance system, supported by a training program with the collaboration of international doctors, interesting research infraestructure and some research projects. Besides, relationships with international universites could be an opportunity to cotutela of thesis, improving the internationalization but also the future demand, so ERASMUS program should be a framework to open opportunities.

Despite positive points detected and the fulfillment of stablished limits, it is important to emphasise the low number of PhD students and fulltime supervisors with habilitation, in part because of the low number of papers published in international high impact journals, so it is necessary to look for estrategies to increase them. COVID pandemia and its effect on countries economy could affect next years to the program so it would be necessary to improve the imagen of the program in website to try to sign international candidates in a country where there will be important investment in civil engineering. Estrategies to improve the internationalization of the program as well as the look for funds should be also priority to improve quality indicators.

VI. Annexes

The following types of documents shall be attached:

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