Annex 3

Nr. înregistrare: 3316/18.06.2024

External evaluation report for the setting up (establishment) of a doctoral study domain

Contents

I. Introduction[1]

This document has been written to evaluate the start-up of a doctoral program in Civil Engineering and Buildings Services field within the interdisciplinary doctoral school in Transilvania University of Brasov (UniTBv). The evaluation has been developed during 12th, 13th and 14th June and the expert panel has been composed by:

- Prof. Loretta Batali (Technical University of Civil Engineering Bucharest) - coordinator
- Prof. Dorina Isopescu (Technical University Gh. Asachi Iasi)
- Prof. Montserrat Zamorano (Spain)
- Student CHIRIAC Gabriel-Adrian (University Polytechnic Bucharest)

Doctoral study programs in UniTBv are organized and carried out within IOSUD-UniTBv, through the Interdisciplinary Doctoral School (SDI), integrated into the structure of the Vice-Rectorate for Scientific Research and Informatization. SDI operates since 2010 to coordinate all doctoral activities within the university and, currently, includes 22 doctoral fields, which fall under 6 fundamental domains and 11 branches of science. The mission of the ISD is to develop doctoral education activities as well as research activities in the fields of competence identified through the authorized doctoral domain. Human resources involved in SDI activity includes a total of 207 people, 143 of them full time, 53 part time and 11 externals, including doctoral supervisors, the titular teaching staff of the

[1] When applicable, gendered information will be presented as well.

disciplines, members of the supervisory committees, and the administrative team. The research infrastructure available to the SDI is primarily formed by the material base of the Research and Development Institute of Transilvania University of Brasov, supplemented by the spaces and research infrastructure of various specialized laboratories within faculties and, currently, includes 12 buildings which host 30 research centres which have high autonomy and concentrate a modern and complex research infrastructure including lines of high-tech equipment for advanced research in the field of sustainable development.

The doctoral program in Civil Engineering and Building Services will be carried out within the SDI and it will include: (i) a training program based on advances university studies (year 1), and (ii) an individual scientific research program. The first one includes a transversal competencies training and a module for specialized competencies. Within the second one, the doctoral supervisor, together with the doctoral student, establishes a maximum of 3 reports of research, based on the doctoral thesis topic. Research activities within the field of Civil Engineering and Building Services will be carried out in the Research Centers existing within the ICDT (Research and Development Institute), as well as within the faculty which have the following research directions: (i) sustainable development in civil engineering and built environment rehabilitation; (ii) evaluation of natural and environmental risk; (iii) geotechnical engineering, communication routes, and civil works; (iv) systems of installations for sustainable development.

II. Methods used

To support the evaluation the following documents have been review:

- The Internal evaluation report for the doctoral study domain under review and its annexes;
- The documents provided by the responsible of the program in physical format during the evaluation visit (if such documents were requested);
- Review of the information available on the website of the IOSUD/the Doctoral School(s).
- Visiting the buildings of the institution.

Besides, the evaluation has been supported on meeting and discussions with members of the management of the Doctoral School where the doctoral study domain under review will operate, doctoral advisors in the doctoral study domain under review, representatives of the various structures of the IOSUD/Doctoral School where the doctoral study domain under review is operating, for example the Council of the Doctoral School, the Evaluation and Quality Assurance Commission, the Ethics Commission, among others.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

This domain analyses the institutional capacity according to three important criteria: administrative, and financial resources, research infrastructures and quality of human resource. It includes three criteria, five standards and ten indicators, all of them considered fulfilled. According to the analysis of evidences and evaluation report, it is possible conclude that the University has the administrative, research infrastructure and human resource to start the doctoral program on the field Civil Engineering and Building Services. However it would be recommendable to make effort to increase the number of supervisors in the next years, as well as the research equipment to attract students and collaborations (national and international universities, public and private institutions).

Criterion A.1. Administrative and managerial institutional structures, and financial resources

For this criterion, guidelines include two standards and four indicators, all of them considered fulfilled. Results conclude that the institution has administrative, logistics resources and managerial structures to support the conduct of doctoral activities.

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

The standard related with the organization of doctoral studies has been performance by two indicators, both of them considered fulfilled. The institution has internal regulations which are effectively implemented, so it is possible conclude that there are mechanisms provided for administrative management according to specific legislation on the organisation of doctoral studies.

Performance indicator A.1.1.1. The existence of specific regulations and their application at the level of the doctoral school that the doctoral domain is a part of:

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 the CSD, and evidence that such elections were conducted;

c) methodologies for organising and conducting doctoral studies (admission of doctoral students, completion of doctoral studies);

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

e) functional management structures (Council of the doctoral school), including proof of the regular frequency of convening their 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.

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), 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.

Recommendations:

The indicator is fulfilled.

Performance indicator A.1.1.2. The doctoral school's Regulations include mandatory criteria, procedures and standards concerning the aspects specified in art. 17, para. (5) of Government Decision no. 681/2011 on the approval of the Code of Doctoral Studies, as further amended and supplemented.

The regulation of the Doctoral School of Applied Sciences was drawn up in compliance with the provisions of article 17 of Government Decision no. 681/2011 on the approval of the Code of Doctoral Studies, as further amended and supplemented, including the following instructions on: admitting new doctoral supervisor within SDI; revoking the doctoral supervisors' affiliation to SDI; changing the doctoral supervisor; the mediation and settlement of the conflicts related to the doctoral activity; the equivalence/recognition of the advanced university training programme and of the scientific research programme; conducting the PhD students' activity, the interruption, extension of doctoral studies and on granting the period of grace; decision-making regarding the structure and content of the advanced university training program; the completion and public defence of doctoral theses. Besides the following regulations and/or procedures have been approved: the prevention of fraud in scientific research, including plagiarism; ethics and academic integrity; access to resources.

Recommendations:

The indicator is fulfilled.

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

The standard related with the logistic resources to carry out the mission of the doctoral studies has been performance by two indicators, both of them considered fulfilled. 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. Besides, a procedure for finalizing doctoral theses and the necessary forms have been included as evidences. In consequence, it is possible conclude that the IOSUD has the logistical resources necessary to carry out the doctoral studies mission.

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.

There is an online electronic platform system in place which ensuring direct access to personal information for both doctoral students and supervisors, without compromising data security and violating regulations regarding personal data protection and confidentiality. Contract signed in 2016 as well as some screening captures of the electronic platform have been included as evidence.

Recommendations:

The indicator is fulfilled.

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

The verification of the originality of all doctoral theses entered into the finalization procedure has been implemented through a specialized electronic document comparison service and identification of the degree of similarity with other sources using the following two online software applications: sistemantiplagiat.ro and Turnitin. The acquisition and implementation of both electronic services is correlated with the methodology for the evaluation of doctoral theses. Procedure for finalizing doctoral theses and the necessary forms have been included as evidences.

Recommendations:

The indicator is fulfilled.

Criterion A.2. Research infrastructure

For this criterion, guidelines include one standard and one indicator which quantify the research infrastructure to support the conduct of doctoral activities. The indicator is fulfilled meaning that the general services of the University, the Faculty of Civil Engineering has laboratory equipment, databases, software, computers, study rooms and another materials and facilities available for PhD students, researchers and teachers. So, it is possible conclude that there is a suitable research infrastructure to support research demands of students and researchers.

Standard A.2.1. The IOSUD has a modern research infrastructure to support the performance of specific doctoral study activities.

This standard includes an indicator which shows that the general services of the University, Faculty of Civil Engineering and PRO-DD research centre has laboratory equipment, databases, software, computers, study rooms and another materials and facilities available for PhD students, researchers 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.

The researcher activities within the doctoral specializations for the field of Civil Engineering and Building Service are ensure thanks to the materials and facilities of the departments of the faculty of Civil Engineering including: researching and teaching laboratory equipment, computer labs, database and library. Besides, the PRO-DD research centre within the ICDT Institute has also research infrastructures put to service to the doctoral program. Doctoral programme responsible have explained that research infrastructures are modern and support the conduct of doctoral activities. Visit to installations has included PRO-DD research centre and department laboratories in Civil Engineering Faculty. Nevertheless, it is necessary to improve the equipment to attract students, as well as international universities and private companies and public administration collaboration.

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, and five indicators. The analysis of indicators has concluded that all of them are considered fulfilled showing that the number of PhD advisors with the CNATDCU habilitation and working at full-time and with indefinite contract is enough. Besides, their scientific activity is visible at international level. Nevertheless, during the next years, it is necessary to make an effort to increase the number of supervisors to make possible the growth of the program.

Standard A.3.1. For each domain, there is qualified staff having the experience required for carrying out the doctoral program.

This standard includes three indicators. Their evaluation has shown that all of them could be considered fulfilled. The number and curriculum of supervisors fulfil all the ARACIS requirements. In the case of the number of PhD advisors included in the field fulfilled the minimum number (3) of supervisors with the CNATDCU habilitation and full-time and indefinite contract. So, it is possible conclude that there is qualified staff having the experience required for carrying out the doctoral program.

Performance indicator A.3.1.1. Minimum three doctoral thesis advisors work 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

Within the Faculty of Civil Engineering there are 3 accredited doctoral supervisors and, additionally the responsible of the doctoral programme has explained that there are 2 professors and 12 associate professors in the faculty who can support the disciplines in the training program depending on the students' needs. For accrediting the Civil Engineering and Building Services field, there are two accredited professors and one external professor so the minimum standard for doctoral supervisors in the field is fulfilled (100% of the 3 supervisors meet the minimum standards of the CNATDCU). The research experience of the supervisors includes: hydrology, statistical applied to civil engineering and sustainability in buildings.

Recommendations:

The indicator is fulfilled.

Performance indicator* A.3.1.2. At least 50% of the doctoral advisors in the doctoral domain under review are tenured professors within the IOSUD and have a full-time employment contract for an indefinite period.

Two of the three accredited supervisors are tenured representing 66,7% of the total; in consequence the 50% minimum is fulfilled. In the case of time dedication, and all of them have full-time employment contract for an indefinite period in Transylvania and Oradea Universities.

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 associate professors / 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 general and common training programme for all the engineering fields includes a high number of disciplines taught by teaching staff or researchers with expertise in the fields of the study subjects.

Recommendations:

The indicator is fulfilled.

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

This standard includes two indicators, and both of them has been considered fulfilled. Their analysis has concluded that the doctoral advisors within the doctoral domain are carrying out a scientific activity that is visible at international level.

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 visibility within the past 5 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 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 5 years by their membership on the boards of professional associations, membership in organising committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.

The number of doctoral thesis advisor within that doctoral domain is three and all of them have justified five 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. Besides, they also enjoy international awareness within the past five years, consisting of: academic editor, executive editor or researcher in European project, among others. All these scientific results or contributions are included in CNATDCU standards and are necessary and mandatory for 9btainning the certificate of qualification.

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 5 years.

Out of the total of 3 PhD supervisors affiliated at the time of evaluation meet the required score to fulfil of 25% of the CNATDCU minimum standards score for doctoral supervisors in the field of Civil Engineering and Buildings (Maftei 44%, Barbulescu 39% and Marcela 33,31%).

Recommendations:

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS.

This domain evaluates the number, quality and diversity of candidates enrolled for the admission contest and the content of doctoral programs. To do that two criteria have

been considered using for these 4 indicators, classified in 2 standards, all of them considered fulfilled. Their analysis has shown the existence of a general admission to doctoral study programs well-defined and applied showing the capacity to attract candidates from outside the higher education institution. On the other hand, a general training program for all the domain is well-defined, including an obligatory subject about ethics and academic integrity and another subjects to study in-depth the research methodology and modelling tools, however a potential proposal of specific for the civil engineering fields have not been included and it would be interesting to know the possible specific training necessary to attract students.

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

This criterion includes two standards and four indicators, all of them considered fulfilled and related with candidates admitted process and the content of doctoral program.

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

This standard includes one indicator which has been considered fulfilled because of the existence of a well-defined admission process which take into account their academic, research and professional performance, the interest for scientific research, publications in the domain, the proposal of a research subject and candidate interview.

Performance indicator* B.1.2.1. Admission in the doctoral study programmes is based on selection criteria including the academic, research and professional performance of the candidates; their interest for scientific or artistic/sports research; publications in the domain, and a proposal of a research subject. Interviewing the candidate is mandatory as part of the admission procedure.

An admission to doctoral studies procedure is clearly defined, according to the methodology approved by the Senate and legislation. The doctoral admission competition takes place in the form of a specialized examination with specific tests related to the doctoral field, including mandatory interviews with candidates. The number and type of competition tests for each doctoral field are approved by the SDI Council upon the proposal of doctoral domain coordinators, considering their specificity.

Recommendations:

The indicator is fulfilled.

Criterion B.2. The content of the doctoral programs

This criterion includes one standard and three indicators, all of them considered fulfilled as result of the existence of general training program well-designed and common for all the domains. However, a potential specific list of courses could be proposal according to supervisor's research experience or from masters related with civil engineering and building services field.

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

The standard about the training program is evaluated according to three indicators, all of them considered fulfilled. In general terms the general 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. However, a potential specific list of courses could be proposal according to supervisor's research experience or from masters related with civil engineering and building services domain.

Performance indicator B.2.1.1. The training program based on advanced academic studies includes at least 3 disciplines relevant for the scientific research training of doctoral students, out of which at least one discipline focuses on the in-depth study of research methodology and/or statistical data processing.

The training for students includes an advanced university training program which takes place over the two first semesters and proposes common courses for engineering fields accumulating 30 credits and will accumulate an additional 30 credits in specialized courses established by their research supervisors for each doctoral student. The general training programme is clearly described however specific courses of the domain civil engineering have not been included because it will depend on the students' demands and they could be selected among the courses in masters or could be proposal as new courses if it is necessary. In any case, it could be interested for the program to have a potential proposal of courses according to the supervisor experience.

Recommendations:

The indicator is fulfilled

Performance indicator B.2.1.2. At least one discipline is dedicated to ethics in scientific research and intellectual property, or there are well-defined topics on these subjects within a discipline taught in the doctoral program.

A discipline titled Ethics and Academic Integrity is described and it is proposal for all the doctoral program, so it would be also proposal in the case of the new civil engineering field program. This discipline addresses legislative and methodological aspects of research and results dissemination concerning intellectual property plagiarism and the use of anti-plagiarism software.

Recommendations:

The indicator is fulfilled.

Performance indicator B.2.1.3. The IOSUD has the mechanisms in place to ensure that the academic training program based on advanced higher education studies related to the evaluated domain addresses the "learning outcomes", specifying the knowledge, skills, and the responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities[2].

A total of 10 subjects' sheets have been included in Annexes. All of them include the knowledge, competencies and evaluation criteria.

Recommendations:

The indicator is fulfilled.

DOMAIN C. QUALITY MANAGEMENT

The evaluation of the domain related with the quality management includes two criteria and six indicators, classified according to three standards, all of them considered fulfilled concluding the existence and implementation of the internal quality assurance system based on the existence and periodic implementation of the internal quality assurance system, and the transparency of information and accessibility of learning resources although some specific database for civil engineering field should be provided to improve the potential references for students and researchers.

[2] Or by what the graduate should know, understand and be able to do, according to the provisions of the Methodology for the listing and registration of higher education qualifications in the National Register of Qualifications in Higher Education (RNCIS) approved by the Order of the Minister of National Education no.3475/2017 with subsequent amendments and additions.

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

The standard includes one standard and two indicators which have shown that the institutional framework is in place, and policies and procedures are applied for the internal assurance of the relevant quality.

Standard C.1.1. The institutional framework is in place, and policies and procedures are applied for the internal assurance of the relevant quality.

The standard includes two indicators that have shown that there are implemented proved 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. As results the two indicators are considered fulfilled.

Performance indicator C.1.1.1. The doctoral school to which the doctoral study domain belongs demonstrates that the internal evaluation and quality assurance process of the study domain is carried out constantly, according to a procedure developed and applied at the level of the IOSUD, including an evaluation of the following mandatory criteria:

a) the scientific work of doctoral advisors;

b) the infrastructure and logistics needed for carrying out the research activity;

c) the regulations and procedures based on which doctoral studies are organised;

d) the scientific activity of doctoral students;

e) the training program based on advanced higher education studies of doctoral students;

f) social and academic support services (including for participation in various events, publishing papers, etc.) and counselling services available for the doctoral students.

A methodology on the internal evaluation of the Interdisciplinary Doctoral School, periodic internal evaluation of the doctoral supervisors' activity, periodical internal evaluation of the doctoral fields, PhD students' activity, PhD students' training programme based on advanced academic studies, and periodic evaluation of support services for PhD students, have been drafted by the Council for Doctoral University Studies and being approved. It is available for consultation on the webpage of IOSUD-UNITBV. The internal evaluation process included the mandatory criteria.

Recommendations:

The indicator is fulfilled.

Performance indicator* C.1.1.2. Mechanisms are implemented during the doctoral study program to enable identification of the doctoral students' 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.

SDI has developed a questionary for consulting doctoral students about their level of satisfaction with the doctoral study program and identifying their needs for quality improvement. The questionary form about module of transversal competencies has been provided and it includes evaluation about content of the disciplines, competencies, number of hours, evaluation methods, utility of module and recommendations.

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 evaluation 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. However, some specific database for civil engineering field should be provided to improve the potential references for students and researchers.

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

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. Subject to compliance with the data protection regulations in force, the IOSUD publishes the following types of information on the website of the higher education institution:

a) the regulations of the doctoral school;

b) the admission regulations;

c) the doctoral study contract;

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

e) the content of the training programs 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 in the domain concerned, with basic information (year of enrolment; advisor);

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

i) links to the summaries of the doctoral theses to be presented publicly, as well as the day, time and place where they will be presented, at least 20 days before the presentation.

On the website of IOSUD-Transylvania University of Brasov it is included a section dedicated to the Interdisciplinary Doctoral School: About the School, doctoral programmes, admission, structure of studies, doctoral thesis defence, scholarships, financing, awards, regulations and Instructions, doctoral conference, news and events, contact and local information. In this website it will be included the information about the doctoral program in civil engineering and buildings field. The website is in Romanian and English.

Recommendations:

The indicator is fulfilled.

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

This standard includes three indicators, all of them considered fulfilled, showing that doctoral students and researches 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. However specific database on field civil engineering should be included to improve the research opportunities.

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.

A list of databases available for students have been provided including scopus or web of sciences, among others. All PhD students and researchers have free access to these scientific resources. Nevertheless, specific database about civil engineering could be recommended, for example ASCE Library, ASTM Compass, CEDB - Civil Engineering Database; they will contribute to improve research activities.

Recommendations:

The indicator is fulfilled.

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

The University has access to the Turnitin software and guidelines are provided to used it. Evidences of this guides have been provided.

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 a set of internal regulations.

Students will have access to the resources of the Faculty of Civil Engineering and those of the Research Institute which primarily focused on research in the field of civil engineering.

Recommendations:

The indicator is fulfilled.

IV. SWOT analysis

Strengths:

In relation to institutional capacity:

- High experience of the institution organising doctoral studies which has implemented effective functioning mechanisms provided for in the legislation on this topic.
- The existence of the necessary logistic resources to carry out the mission of doctoral studies.
- The existence of an infrastructure to support the performance of the doctoral study activities including: database resources, computers laboratories, software and experimental laboratories, among others.
- The participation of three supervisor with scientific activity which is visible at international level, and teachers with experience for carrying out the doctoral program. This number could be considered enough to start-up the field program.

In relation to educational effectiveness:

- The existence of a general admission process based on selection criteria including the academic, research and professional performance of the candidates.
- The existence of a well-defined training program that includes common disciplines which are relevant for the scientific research training of doctoral students.
- The existence of a mandatory discipline dedicated to ethics and intellectual property in scientific research.

In relation to quality management:

- The existence of mechanism to ensure the quality of the academic training program.
- Students and future candidates have information of interest published in electronic format.
- All doctoral students have free access to resources needed for conducting doctoral studies, including, among others: research laboratories and other facilities, databases, software, and electronic system for verifying the degree of similarity with other existing scientific works.

Weaknesses:

In relation to educational effectiveness:

- The inexistence of a proposal of specific training program related with civil engineering field.
- The low number of supervisors could limit the growth of the number of students of the program.

In relation to quality management:

- There is not specific database related with civil engineering field.

Opportunities:

- Attraction of national and international students to participate in the doctoral program.
- Attraction of local, national and international researchers to participate in the doctoral program.
- Motivation for existing faculty to become accredited and participate in the program, thereby promoting research and enhancing the international visibility of the centre and the university.
- Attracting companies to partner with the university on research projects, thereby promoting knowledge transfer and securing financial resources.
- Attraction of financial resources from government to improve research resources.
- Opening of new research initiatives in collaboration with researchers from other doctoral fields.

Threats:

- Low number of students due to the greater attractiveness of jobs outside the university.
- Low interest from the business sector in technological development and innovation in the field.

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (PI, PI*, CPI)	Performance indicator	Judgment	Recommendations
1.	PI	A.1.1.1. The existence of specific regulations and their application at the level of the doctoral school that the doctoral domain is a part of: 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 the CSD, and evidence that such elections were conducted; c) methodologies for organising and	Fulfilled	

No.	Type of indicator (PI, PI*, CPI)	Performance indicator	Judgment	Recommendations
		conducting doctoral studies (admission of doctoral students, completion of doctoral studies); d) existence of mechanisms for recognising the status of a doctoral advisor and the equivalence of a doctoral degree obtained abroad; e) functional management structures (Council of the doctoral school), including proof of the regular frequency of convening their meetings; f) the contract for doctoral studies; g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.		
2.	PI	A.1.1.2. The doctoral school's Regulations include mandatory criteria, procedures and standards concerning the aspects specified in art. 17, para. (5) of Government Decision no. 681/2011, as further amended and supplemented.	Fulfilled	
3.	PI	A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.	Fulfilled	
4.	PI	A.1.2.2. The existence and use of an appropriate software and evidence of its use to verify the percentage of similarity in all doctoral theses.	Fulfilled	
5.	CPI	A.2.1.1. The venues and the material equipment available to the IOSUD/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.	Fulfilled	
6.	CPI	A.3.1.1. Minimum three doctoral thesis advisors work within that doctoral domain, and at least 50% of them (but no	Fulfilled	

No.	Type of indicator (PI, PI*, CPI)	Performance indicator	Judgment	Recommendations
		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.		
7.	PI *	A.3.1.2. At least 50% of the doctoral advisors in the doctoral domain under review are tenured professors within the IOSUD and have a full-time employment contract for an indefinite period.	Fulfilled	The responsible of the field should try to increase the number of supervisors in a short time to strengthen the program and attract students and companies' collaboration.
8.	PI	A.3.1.3. The study subjects in the education programme 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 associate professors / 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	
9.	CPI	A.3.2.1. At least 50% of the doctoral thesis advisors in the evaluated domain have at least 5 Web of Science- or ERIH-indexed publications in magazines of impact, or other achievements of relevant significance for that domain, including international-level contributions that indicate progress in scientific research - development - innovation for the evaluated domain. The aforementioned doctoral thesis advisors enjoy international awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral commissions at universities abroad or co-leading with universities abroad. For Arts	Fulfilled	

No.	Type of indicator (PI, PI*, CPI)	Performance indicator	Judgment	Recommendations
		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 organising committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.		
10.	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	
11.	PI *	B.1.2.1. Admission in the doctoral study programmes is based on selection criteria including the academic, research and professional performance of the candidates; their interest for scientific or artistic/sports research; publications in the domain, and a proposal of a research subject. Interviewing the candidate is mandatory as part of the admission procedure.	Fulfilled	
12.	PI	B.2.1.1. The training program based on advanced academic studies includes at least 3 disciplines relevant for the scientific research training of doctoral students, out of which at least one discipline focuses on the in-depth study of research methodology and/or statistical data processing.	Fulfilled	It could be interested for the program to have a potential proposal of courses according to the supervisor experience. It could be a way to attract students. The collaboration of international researchers for seminaries o short courses could be welcome to strengthen students exchange and their opportunities to improve their researches.
13.	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	
14.	PI	B.2.1.3. The IOSUD has the mechanisms in place to ensure that the academic training program based on advanced higher education studies related to the evaluated domain addresses the	Fulfilled	

No.	Type of indicator (PI, PI*, CPI)	Performance indicator	Judgment	Recommendations
		"learning outcomes", specifying the knowledge, skills, and the responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities.		
15.	PI	C.1.1.1. The doctoral school to which the doctoral study domain belongs demonstrates that the internal evaluation and quality assurance process of the study domain is carried out constantly, according to a procedure developed and applied at the level of the IOSUD, including an evaluation of the following mandatory criteria: a) the scientific work of doctoral advisors; b) the infrastructure and logistics needed for carrying out the research activity; c) the regulations and procedures based on which doctoral studies are organised; d) the scientific activity of doctoral students; e) the training program based on advanced higher education studies of doctoral students; f) social and academic support services (including for participation in various events, publishing papers, etc.) and counselling services available for the doctoral students.	Fulfilled	
16.	PI *	C.1.1.2. Mechanisms are implemented during the doctoral study program to enable identification of the doctoral students' 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	
17.	CPI	C.2.1.1. Subject to compliance with the data protection regulations in force, the IOSUD publishes the following types of information on the website of the higher education institution: a) the internal regulations of the doctoral school; b) the admission regulations;	Fulfilled	

No.	Type of indicator (PI, PI*, CPI)	Performance indicator	Judgment	Recommendations
		c) the doctoral study contract; d) the study completion regulation including the procedure for the public presentation of the thesis; e) the content of the training programs 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 in the domain concerned, with basic information (year of enrolment; advisor); h) information on the standards for developing the doctoral thesis; i) links to the summaries of the doctoral theses to be presented publicly, as well as the day, time and place where they will be presented, at least 20 days before the presentation.		
18.	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	Specific database about civil engineering recommended to be included by the university, for example ASCE Library, ASTM Compass, CEDB - Civil Engineering Database.
19.	PI	C.2.2.2. Each doctoral student, upon request, has access to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.	Fulfilled	
20.	PI	C.2.2.3. All doctoral students have access to the scientific research laboratories or to other facilities depending on the specific domain / domains within the doctoral school, according to a set of internal regulations.	Fulfilled	

VI. Conclusions and general recommendations

The evaluated proposal shows important strengths in relation to institutional capacity, educational effectiveness, and quality management that support the start-up of a doctoral program in the civil engineering field at Transylvania University of Brasov.

The university has an interdisciplinary doctoral school with extensive experience and a tested logistics system according to legislation, as well as a well-defined training program that includes common disciplines relevant for the scientific research training of

doctoral students. Additionally, there are sufficient resources to start the doctoral program, including research laboratories and other facilities, databases, and software. Consequently, it is possible to consider that this experience guarantees the satisfactory development of the new field, and I positively endorse the start-up of the program in Civil Engineering and Building within the interdisciplinary doctoral school at Transylvania University of Brasov.

Nevertheless, in the short term, it is recommended to include a specific database related to the civil engineering field as well as more specialized laboratory equipment. These improvements could facilitate the initiation of new research initiatives, attract students, and enable partnerships with companies for research projects, thereby promoting knowledge transfer and securing financial resources. Finally, the program's administrators could make an effort to design a specific training program related to the civil engineering field; this could showcase research opportunities to potential students and attract interest and collaboration opportunities from the business sector in technological development and innovation in the field. This specialized training could also foster collaboration with international professors and researchers, opening opportunities for students and the program in general.

VII. Annexes

Detailed schedule of the evaluation visit

HOUR	ACTIVITY
Wednesday, 12.06.2024	
12:00-12:30	Organizational meeting of the panel evaluators
12:30-13:00	Panel evaluators` meeting with representatives of the institution and of the Council for Academic Doctoral Studies (CSUD)
13:00-14:00	Lunch break
14:00-15:00	Panel evaluators` meeting with the contact person for the doctoral study domain under review and the team who drafted the internal evaluation report
15:00-17:00	Visiting the educational and research infrastructure
Thursday, 13.06.2024	
9:00-9:30	Panel evaluators` technical meeting
9:30-10:00	Panel evaluators` meeting with the contact person for the doctoral study domain under review
10:00-11:00	Panel evaluators` meeting with the academic staff corresponding to the doctoral study domain
11:00 -12:00	Panel evaluators` meeting with the Commission for Quality Evaluation and Assurance (CEAC) members / Quality Assurance Department
12:00 -13:00	Panel evaluators` meeting with Doctoral Schools Council (CSD) members
13:00-14:00	Lunch break
14:00-15:00	Panel evaluators` meeting with the members of the Ethics Commission

HOUR	ACTIVITY
15:00-16:00	Panel evaluators` meeting with the Directors/ persons in charge of the research centers/laboratories within the doctoral study domain
16:00-18:00	Carrying out the specific activities of the panel evaluators and making entries in the draft of the external evaluation report.
Friday, 14.06.2024	
9:00 -11:00	Carrying out the work of the panel evaluators. Discussions on the preparation of the external evaluation report of the panel evaluators.
11:00-12:00	Panel evaluators` meeting with representatives of the institution under review to discuss on the conclusions of the evaluation process.