

The External Evaluation Report of a Doctoral Study Domain

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I. Introduction¹

Ovidius University of Constanța has requested the periodic external evaluation of doctoral studies (re-accreditation of an institution organising doctoral study programmes) among which is **Biology** as a doctoral study domain of **the Doctoral School of Applied Sciences**. The doctoral school is organised by the Faculty of Natural and Agricultural Sciences.

In the scope of external evaluation of the University, organising doctoral study programmes, the doctoral study domain of biology was presented by the director (responsible for the domain) Professor Dan Cogălniceanu, and the Dean of the Faculty of Natural and Agricultural Sciences. The Internal Evaluation Report is co-signed by ICD Director, CEAC President (who is also a Vice-Rector for education and quality management, and the Rector of The University. The domain was valued by the domain evaluation panel:

- Professor Marieta Costache, coordinator (University of Bucharest)
- Professor Mladen Krajacic, international expert (University of Zagreb)
- Ms. Alina-Ionela Filip, PhD student ("Vasile Alecsandri" University of Bacău)

The external evaluation process was accomplished in hybrid mode by combining face-to-face site-visit and online sessions in the period of November 22 to 26, 2021.

Ovidius University of Constanța is a public university – a part of the Romanian state education system. It is established in 1961, becoming a university in 1990, thus it would be considered a young university. Its mission, clearly declared in the University Charter, would be to develop European standards in higher education, scientific research and artistic creation, being at the same time the core institution of research, technological development and innovation of Dobrogea local community, and Black Sea region including Danube delta area.

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



Doctoral studies have been organised since 1990, when the first doctoral supervisors were nominated in several areas, including biology. Starting with 2012/2013, doctoral studies are organised in the doctoral schools subordinated to the Doctoral Studies Institute of the University. Nowadays, there are 5 doctoral schools that organise 8 doctoral study domains. The domain of Biology is a part of the Doctoral School of Applied Sciences, together with Civil Engineering and Instalation.

II. Methods used

The evaluation process started with analysis of the Report of Internal Evaluation, signed by Professor Dan Cogălniceanu as a person responsible for the domain. The Report was accompanied by a number of Annexes, covering all the organising, structural and governing issues. Documents, data and information available on the institutional websites (the University, the Faculty, the Doctoral School) has also been analysed.

The face-to-face visit to the Faculty of Natural and Agricultural Sciences (classrooms, research centres with constitutive laboratories, library) was organised for, and accomplished by the Romanian panel members (coordinator, student-member), whereas the international panel member has only participated in online evaluation performances. The later encompassed a series of sessions in which panel members have met the team members who prepare the Report of Internal Evaluation, the Dean of the Faculty, representatives of academic staff, representatives of both doctoral students and graduates of the Doctoral School, as well as employers of the graduates. Ethics issues were assessed and discussed by IOSUD evaluation panel members only.

The evaluation process was conducted in line with Guidelines regarding the activities carried out during the on-site visit by the Experts' Panel to evaluate a Doctoral Study Domain (ARACIS), the List of the domains, criteria, standards, performance indicators, and the List of critical performance indicators for the periodical external evaluation of Doctoral Study Domains (ARACIS).

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

The Faculty Natural and Agricultural Sciences with the Doctoral School of Applied Sciences provides all aspects of institutional capacity for an efficient delivery of doctoral study programme in the domain of biology.

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

Standard A.1.1. The functional effectiveness is provided for in general legislation at the university level, as well as specific legislation at the doctoral school and the faculty level.

Performance Indicator A.1.1.1.

The general functioning mechanisms of doctoral studies are regulated at the University level by the document adopted by the Senate. Doctoral schools are subordinated to the Institute of Doctoral Studies, with the role of administrative coordination. The Council for University Doctoral Studies is a governing body headed by a director. Currently, the Council has 16 members, including doctoral



supervisors and doctoral students. The election methodology is approved by the Senate and presented on the University website.

Specific mechanisms applied for the domain are based on the internal regulations of the Doctoral School of Applied Sciences running by the Doctoral School Council which is responsible for the content of the doctoral study programme. It is headed by a director whose position is equivalent to the head of the department. Decisions of the Doctoral School are based on the Institutional Regulation on the organisation and development of doctoral studies.

At the Ovidius University of Constanța, the method of accepting new doctoral supervisors is provided through the Operational Procedure on the method of automatic recognition of the quality of doctoral supervisor obtained in foreign accredited university institutions (visible on the University website).

Recommendations:

The indicator is fulfilled.

Performance Indicator A.1.1.2.

Mandatory criteria, procedures and standards, established in the scope of the doctoral school regulations, are applied to all the issues regarding doctoral supervisors, the training programme, obligations of doctoral candidates and prevention of fraud, including plagiarism.

Recommendations:

The indicator is fulfilled.

Standard A.1.2. The Faculty of Natural and Agricultural Sciences with the Doctoral School of Applied Sciences has the logistical resources necessary to carry out the doctoral studies' mission.

Performance Indicator A.1.2.1.

At the University level, the Doctoral module of the integrated management system is operable. It includes information about students' doctoral theses, essays, projects and all the activities they perform during the doctoral training, with an informative progress report.

Recommendations:

The indicator is fulfilled.

Performance Indicator A.1.2.2.

The software used to verify similarities or plagiarism is available to all the teachers and supervisors, and an evidence of its use is demonstrated in the Internal Evaluation Report. It is an object of permanent concern at the University, and its use is considered an obligation of the doctoral studies according to the regulation documents. The *Sistemantiplagiat.ro* anti-plagiarism platform is currently being used.

Recommendations:

The indicator is fulfilled.

Standard A.1.3. The Faculty of Natural and Agricultural Sciences makes sure that financial resources are used optimally, and the revenues obtained from doctoral studies are supplemented through additional funding besides governmental funding.



Performance Indicator A.1.3.1.

During the last evaluation period (2016-2020), 11 research grants were carried out, which also involved doctoral or postdoctoral students in the field of Biology (Annex A.1.3.1.). Through those grants, additional financial resources were made available to doctoral and postdoctoral students for research activities and dissemination of research results.

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.1.3.2.

In the last 5 years, two PhD students and a postdoctoral student in the field of Biology have benefited from a one-year scholarship through the POCU Antreprenordoc project and another doctoral student from a scholarship offered by SDSA (Annex A.1.3.2.).

In the last five years, 7 doctoral students have been employed in research projects (out of a total of 19), which represents a percentage of 36% of the total number of doctoral students).

Recommendations: In spite of exceeding those criteria, the Doctoral School is expected to make additional efforts to take advantage of every research grant by engaging doctoral students. As they are essential engine (together with postdoctoral fellows) of every research intensive university, there has to be no research project without engaged doctoral student.

The indicator is fulfilled.

Performance Indicator *A.1.3.3.²

In 2019, participation in international conferences for 2 PhD students (in Serbia) and one participation in a statistics course in Scotland for another 2 PhD students (course canceled) were approved. Also approved in 2019 were two reports on the purchase of reagents and small inventory equipment, worth 5,630 lei.

In 2020, the participation of a doctoral student and a postdoctoral student in a conference held in Germany, canceled due to the pandemic, was approved.

The expenses with the financing of the mobility of the doctoral students realized represent 1.93% of the total amounts related to the doctoral grants and the tuition fees from the form of education with fee, and the approved ones 7.26%. The pandemic conditions led to the cancellation or online conduct of scientific events, which did not allow the spending of larger amounts so as to reach at least 10% of the amounts spent on doctoral grants for the training of PhD students.

Recommendations: As pandemic conditions influenced the decreased expenses of doctoral students mobility, the funds might have been relocated to other expenses of doctoral trainings, e.g., consumables and equipment.

The indicator is partially fulfilled.

Criterion A.2. Research infrastructure

Standard A.2.1. The Doctoral School of Applied Sciences has a modern research infrastructure to support the conduct of specific activities in the scope of doctoral study programme in biology.

Performance Indicator A.2.1.1.

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.



PhD students in biology carry out research activities within the following research structures: Research Center of the Faculty of Natural and Agricultural Sciences which includes a laboratory of aquatic ecology, a laboratory for inventory and monitoring of biodiversity, skeletochronology laboratory and services GIS, Agricultural Experimental Base located on campus and which includes facilities for mesocosm experiments for doctoral students, Biobase developed through the project CNFIS-FDI-2018-0462, Development Research Center for Morphological and Genetic Study in Malignant Pathology (CEDMOG), center co-financed by the European Regional Development Fund (A.2.1.1.).

Field research activities take place in locations with which the UOC has established partnerships and where there are accommodation facilities (Histria Archaeological Complex, Măcin Mountains National Park - Cetățuia Visitor Center).

In the last 5 years, the Doctoral School has been equipped with a series of equipment for field research, the funds coming from research projects: DJI Phantom 4 PRO drone with accessories, wildlife surveillance cameras, automatic audio recorders for monitoring the acoustic landscape, winding and lies for monitoring aquatic fauna, semi-analytical portable scales, workstations, laboratory consumables.

Recommendations:

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

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

Performance Indicator A.3.1.1.

Within the PhD field, Biology currently has 5 PhD supervisors, of which 3 are full-time and 2 are retired (A.3.1.). Two of the tenured doctoral supervisors obtained the qualification in 2017. Of the 5 doctoral supervisors, only one meets the minimum CNATDCU standards in force at the time of the evaluation (*Annex A.3.2.2.*). The other PhD supervisors, incumbents and retirees only partially meet the CNATDCU minimum standards that are currently in force (*Annex A.3.2.2.*).

Recommendations:

The indicator is partially fulfilled.

Performance Indicator *A.3.1.2.

Three doctoral supervisors, out of five who are recently active at the Doctoral School of Applied Sciences, have full-time employment contracts for an indefinite period with the University (60%).

Recommendations:

The indicator is fulfilled.

Performance Indicator A.3.1.3.

Concerning their research proficiency, the supervisors are related to the disciplines in the scope of doctoral study programme. Thus, both teaching programme (encompassing taught subjects) and individual research programmes with doctoral candidates are delivered by the experts in the field. Exceptions are the disciplines *Ethics and academic integrity*, taught by a PhD supervisor from IOSUD,



and the *Biostatistics* course, taught by a holder at the UOC, undergoing habilitation in the field of Dentistry (Annex B.2.1.2.). Each of them meets the standards set by Ovidius University of Constanța for the teaching and research functions they perform.

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.3.1.4.

In the field of PhD in Biology, the total number of PhD students coordinated by a PhD supervisor varies between 0 and 9 per supervisor. A single doctoral supervisor coordinates 9 doctoral students, of which 6 are in extension / grace, representing 20% of the total number of doctoral supervisors. The other PhD supervisors coordinate less than 8 PhD students at the same time (Annex A.3.1.4.).

Recommendations: No matter what is allowed by the Romanian law, no one supervisor should have more than three doctoral candidates at the same time. Thus, every case beyond would not be in line with principles that are respected in the European Research Area and the European Higher Education Area.

The indicator is fulfilled.

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

Performance Indicator A.3.2.1.

Four of the 5 PhD supervisors in the field of biology present at least 5 publications indexed Web of Science or ERIH in journals with impact factor.

Three of the PhD supervisors were members of the scientific committees of international conferences, namely in 15 scientific committees, thus being visible internationally. One supervisor is a member of the scientific committees of the two international journals. Two supervisors board members of international professional associations, which demonstrates they are internationally recognised. visibility. One doctoral supervisor had 2 doctoral students in co-supervision with a foreign university (Annex A.3.2.1.).

All the doctoral supervisors have also had other contributions demonstrating their international visibility in biological science.

Recommendations:

The indicator is fulfilled.

Performance Indicator *A.3.2.2.

Only one doctoral supervisor out of the 5 in the field of Biology meets the scores from the minimum standards in force and obtains over 100% of the required score. Another 2 PhD supervisors meet the criterion of 25% of the total points (Annex A.3.2.2 improved). The other PhD supervisors are retired and did not present a clear situation related to these issues. From the data provided by the doctoral supervisors, this performance indicator is not met.

Recommendations: Recruitment of younger academic staff is urgent. There must be a way to do it quickly. By accomplishing that high priority task, the doctoral study domain would fulfill the crucial performance indicator, and ensure the necessary research-intensive environment.

The indicator is partially fulfilled.



Domain B. EDUCATIONAL EFFECTIVENESS

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

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.

Performance Indicator *B.1.1.1.

The ratio between the number of master's degree graduates of other higher education institutions in the country or abroad who have registered for the competition for admission to doctoral studies in the last five years and the number of places financed from the state budget put up for competition in the field of doctoral studies is at least 0.2 or the ratio between the number of candidates in the last five years and the number of places financed from the state budget put up for competition in the field of doctoral studies is at least 1.2. The ratios are 0.7 (minimum 0.2) and 2.6 (minimum 1.2) respectively for the field of Biology (Annex B.1.1.1.).

Recommendations:

The indicator is fulfilled.

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

Performance Indicator *B.1.2.1.

Admission to the SDSA doctoral program is based on selection criteria that include the academic, research and professional performance of the candidates, their interest in scientific research, they already have publications in the field and a research topic proposal. The interview is a mandatory part of the admission procedure. The SDSA regulation stipulates the conditions, the competition tests and the evaluation procedure of the candidates for the admission contest to the Doctoral School of Applied Sciences, Biology field.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.1.2.2.

The expulsion rate of doctoral students, including after dropping out of studies, is 18% calculated over 5 years (Annex B.1.2.1.).

Recommendations:

The indicator is fulfilled.



Criterion B.2. The content of doctoral programs

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.

Performance Indicator B.2.1.1.

The doctoral study program in the field of Biology includes three study modules in the fields of Biochemistry, Ecology and Physiology. Three courses are common to these packages, respectively the courses of Ethics and academic integrity, Biostatistics and Scientific Authority, the rest being specialized courses, synthesis or advanced knowledge (Annex B.2.1.1.). The courses are included in one of the following categories: imposed, optional and complementary.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.2.

A compulsory course in *Ethics and academic integrity* is included in the doctoral training program (Annexes B.2.1.1. And B.2.1.2.).

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.3.

At the level of Ovidius University of Constanța there is and is applied the Operational Procedure regarding the elaboration, updating and approval of the subject sheets for the undergraduate and master's degree study programs, the form of full-time education (Annex B.2.1.3.). This procedure is also applied in the elaboration, updating and approval of the subject sheets for the training program based on advanced university studies within the Doctoral School of Applied Sciences. The presentation sheets of the content of the disciplines taught within SDSA present in detail these aspects (Annex B.2.1.2.), being specific for each course.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.2.1.4.

Throughout the doctoral training period, doctoral students benefit from the advice and guidance of a guidance committee consisting of 3 specialists in the field, with complementary expertise to the doctoral supervisor. The counseling is also manifested through points of view expressed in writing on the occasion of the support of the research projects, of the research reports and of the defense of the doctoral thesis in front of the guiding commission. There are collaborations between the members of the steering committee and doctoral students, including in the publication of scientific papers, even after defending the doctoral thesis. Some members of the steering committee also participate in field research activities. In the pandemic conditions, in the last year, virtual meetings have been held on Skype and / or Webex platforms between doctoral students, coordinator and members of the steering committees.

Recommendations:

The indicator is fulfilled.



Performance Indicator B.2.1.5.

Within the Doctoral School of Applied Sciences, domain Biology, the ratio between the number of doctoral students (19) and the number of teachers / researchers (24) who provide guidance is 0.79.

Recommendations:

The indicator is fulfilled.

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

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

Performance Indicator B.3.1.1.

During the last 5 years (evaluation period), 13 doctoral theses were defended in the field of Biology. PhD students have published 15 WOS-indexed articles, of which 7 are in journals with an influence score higher than 0.2 (Annex B.3.1.1.).

Recommendations:

The indicator is fulfilled.

Performance Indicator *B.3.1.2.

The total of 13 doctoral students have defended their doctoral thesis in the last 5 years. During their doctoral training, they have contributed with 44 scientific presentations (oral and poster) at scientific conferences, mostly international ones (Annex B.3.1.2.). Furthermore, they have contributed with 3 patents and 4 invited oral presentations at prestigious institutes, universities and museums in Madrid, Koblenz (Germany) and Corrientes (Argentina).

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.

Performance Indicator *B.3.2.1.

During the evaluated interval of 5 years, in the public defense of the 13 doctoral theses, 13 external scientific specialists participated as defense committee members in public defense procedures. There were no cases in which more than 2 doctoral theses with external committee member were coordinated in one year by the same doctoral supervisor (Annex B.3.2.1.).

Recommendations:

The indicator is fulfilled.



Performance Indicator *B.3.2.2.

During the evaluated 5-year interval, 13 doctoral theses were defended. The criterion is not met for a single external scientific referent: prof. Univ. dr. Cojocaru Dumitru (Alexandru Ioan Cuza University of Iași) who was present in 5 commissions (38%) (Annex B.3.2.2.).

Recommendations: This is probably the new criterion and the the Doctoral School has not pay attention on it. It should not be some problem to manage that.

The indicator is partially fulfilled.

Domain C. QUALITY MANAGEMENT

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

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.

Performance Indicator C.1.1.1.

The Doctoral School of Applied Sciences, which includes the field of Biology, constantly carries out a process of evaluation and internal quality assurance according to the operational procedures implemented by IOSUD (Annex A.1.1.1.). The infrastructure and logistics necessary for carrying out the research activity are periodically analyzed and improvement measures are proposed where appropriate. The report is then sent to the FDI CEAC committee in order to identify measures to remedy the problems found.

As a result of the periodic evaluations, there is a *Plan of measures* designed to improve the activity of doctoral students, with concrete measures to support doctoral students in research and dissemination of research results. Doctoral supervisors are periodically evaluated by colleagues (peer evaluation), by doctoral students and by the SDSA director on the basis of evaluation sheets (Annex C.1.1.1.).

As a result of the internal evaluation some measures are proposed with the aim of improvement of the doctoral programme quality, with emphasis on scientific research infrastructure, research results dissemination and encreasing of international collaboration.

Recommendations:

The indicator is fulfilled.

Performance Indicator *C.1.1.2.

At the level of the Doctoral School of Integrative Biology, the Questionnaire for assessing the quality of doctoral studies is applied annually. The doctoral students give suggestions for improvement of the academic and administrative activity. The report of the internal evaluation commission contains a series of recommendations that are transposed in the action plan.

Recommendations:

The indicator is fulfilled.

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



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

Performance Indicator C.2.1.1.

Information of interest to doctoral students and information of public interest are available on the University website and on the website of the Ovidius University of Constanța. This information concerns the doctoral school regulations, admission regulations, doctoral studies contract, the regulations for completing the studies including the procedure for public defense of the thesis, the content of the study programme, and the research topics of potential supervisors. Institutional contact data, list of PhD students in the field with basic information, and information about the standards for elaboration of a doctoral thesis are also available. There are also links to summaries of the doctoral theses to be defended.

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.

Performance Indicator C.2.2.1.

Doctoral students have full access to the existing book collection in the Ovidius University Library, to specialized journals, dictionaries, encyclopedias, atlases, but also to the Digital Library, connected to the flow of international scientific publications (Annex C.2.2.1). Through the Virtual Library, access is provided to a number of academic databases relevant to the field of Biology.

All PhD students have free access to the Anelis PLUS platform, either through mobile access or through the IPs of the university's servers (Annex C.2.2.1). PhD students also have access to the "American Corner" Constanța, the result of a partnership between the US Embassy in Bucharest and the "Ovidius" University of Constanța opened in May 2006 (Annex C.2.2.1). The center operates as a library, with a possibility of borrowing volumes or reading in the reading room.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.2.2.2.

An electronic system for verifying the degree of similarity with other scientific works is also available. The access is ensured for both supervisors and doctoral students.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.2.2.3.

All doctoral students have access to scientific research laboratories or other facilities of the Faculty of Natural and Agricultural Sciences. This is ensured by the proper regulations on both the university level and the level of the Doctoral School.

Recommendations:

The indicator is fulfilled.



Criterion C.3. Internationalization

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

Performance Indicator *C.3.1.1.

The requirement that at least 35% of doctoral students complete a training course abroad or some other form of mobility, such as participation in international scientific conferences, is fulfilled by the Doctoral School. A series of agreements between the Faculty of Natural and Agricultural Sciences, or the university, and other universities, research institutes and other institutions contributes to students mobility.

Recommendations: This performance indicator can relatively easily be fulfilled by attending conferences. However, a research intensive university/doctoral school has to put emphasis on research training of doctoral students. Additional efforts are always expected to ensure funds, and introduce policies and measures aiming at increasing the duration of doctoral students' internships in advanced laboratories of the internationally recognised scientific institutions. International collaborations would also help in establishing fruitful environment for long-term internships. The later would additionally contribute to doctoral supervisors' international visibility.

The indicator is fulfilled.

Performance Indicator C.3.1.2.

Organising co-supervision of doctoral research by recruiting leading experts from foreign universities is reported in the Internal Evaluation Report of the Doctoral School.

Recommendations: It would be useful and attractive for doctoral students to intensify collaboration with research training mobility, but also to invite leading international experts to deliver courses/lectures in the scope of doctoral study programme.

The indicator is fulfilled.

Performance Indicator C.3.1.3.

During the last five years (the recent evaluation period), more than 10% of the individual doctoral research programmes have been co-supervised by international experts. Accordingly, the doctoral theses within the doctoral school have been written and/or defended in English.

Recommendations: It would be necessary to intensify international collaboration in which doctoral students actively participate. Additional efforts are recommended to enhance international visibility of the Doctoral School of Integrative Biology and to attract doctoral candidates from neighbouring countries.

The indicator is fulfilled.



IV. SWOT Analysis

<p><u>Strengths:</u></p> <ul style="list-style-type: none"> - the strengths identified over the entire indicators' analysis report the will be reproduced. Some other general strengths that can be included in the given indicators' analysis can also be included. - the large number of grants (11 in the last 5 years) through which they were attracted in SDSA, Biology field, additional financial resources; - high percentage of PhD students (36%) employed in research projects; - the 13 PhD students who have completed their doctoral studies in the last 5 years have published 15 WOS indexed articles, of which 7 in journals with AIS greater than 0.3 and have presented (oral, poster) 44 scientific papers at Conferences and International scientific sessions, the vast majority of which took place abroad; -high percentage of doctoral students (26%) who participated in vocational training mobilities, ERASMUS + type and other training internships abroad; -high percentage of doctoral students (100%) who participated in Conferences and Scientific Sessions held abroad; - there is a high degree of satisfaction of doctoral students related to the doctoral field studied / graduated; 	<p><u>Weaknesses:</u></p> <ul style="list-style-type: none"> - the weaknesses identified throughout the report will be resumed as part of the indicators' analysis. Other general weaknesses that do not fall within a particular indicator may be formulated. - due to the pandemic conditions, not all the financial resources allocated by the Doctoral School could be used for the professional training expenses of the doctoral students; - the criterion by which 50% of the doctoral supervisors meet the minimum CNATDCU standards currently in force is not met; - with the exception of one doctoral supervisor, the other 4 do not meet the condition of having at least 25% of the required score according to the minimum CNATDCU standards currently in force;
<p><u>Opportunities:</u></p> <ul style="list-style-type: none"> - possible lines of action for the development of the institution under review shall be identified; - examples of opportunities: a favorable economic environment in the proximity of the assessed institution, the uniqueness of the study programs and their relevance to the local/national market, the overall attractiveness of the study programs etc. - The doctoral school of Applied Sciences, Biology can attract doctoral students from institutions in 	<p><u>Threats:</u></p> <ul style="list-style-type: none"> - the possible causes of the deficient aspects (the causes of the identified weaknesses), which are practically the threats to the proper functioning of the institution, shall be identified; - besides, there may be external threats, such as: the inopportune economic environment in the proximity of the assessed institution, the conduct of low attractiveness study programs for both candidates and the labor market etc.

<p>Dobrogea for conducting research in the Black Sea and Danube Delta, which can give it a particularity in relation to Doctoral schools at other universities.</p>	<p>- the recent pandemic conditions have restricted the possibilities of participation of doctoral students and doctoral supervisors in training courses abroad, at international scientific conferences and symposia (many have been canceled)</p>
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V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
1.	PI	<p>A.1.1.1. The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:</p> <p>a) the internal regulations of the Doctoral School;</p> <p>b) the Methodology for conducting elections for the position of director of the Council of doctoral school (CSD), as well as elections by the students of their representative in CSD and the evidence of their conduct;</p> <p>c) the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);</p> <p>d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;</p> <p>e) functional management structures (Council of the doctoral school), giving as well proof of the regularity of meetings;</p> <p>f) the contract for doctoral studies;</p> <p>g) internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.</p>	<p>The indicator is fulfilled.</p>	
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>	<p>The indicator is fulfilled.</p>	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
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.	The indicator is fulfilled.	
4.	PI	A.1.2.2. The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses.	The indicator is fulfilled.	
5.	IP	A.1.3.1. Existence of at least one research or institutional / human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation, or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.	The indicator is fulfilled.	
6.	PI *	A.1.3.2. The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%.	The indicator is fulfilled.	In spite of exceeding those criteria, the Doctoral School is expected to make additional efforts to take advantage of every research grant by engaging doctoral students. As they are essential engine (together with postdoctoral fellows) of every research intensive university, there has to be no research project without engaged doctoral student.
7.	PI *	A.1.3.3. At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad,	The indicator is partially fulfilled.	As pandemic conditions influenced the decreased expenses of doctoral students mobility, the funds might have been relocated to other expenses of doctoral trainings, e.g., consumables and equipment.

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		publication of specialty papers or other specific forms of dissemination etc.).		
8.	CPI	A.2.1.1. The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly	The indicator is fulfilled.	
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.	The indicator is partially fulfilled.	Recruitment of younger academic staff is urgent. There must be a way to do it quickly. By accomplishing that high priority task, the doctoral study domain would fulfill the crucial performance indicator, and ensure the necessary research-intensive environment.
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.	The indicator is fulfilled.	
11.	PI	A.3.1.3. The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.	The indicator is fulfilled.	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
12.	PI *	<p>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%.</p>	<p>The indicator is fulfilled.</p>	<p>No matter what is allowed by the Romanian law, no one supervisor should have more than three doctoral candidates at the same time. Thus, every case beyond would not be in line with principles that are respected in the European Research Area and the European Higher Education Area.</p>
13.	CPI	<p>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.</p>	<p>The indicator is fulfilled.</p>	
14.	PI *	<p>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</p>	<p>The indicator is partially fulfilled.</p>	<p>Recruitment of younger academic staff is urgent. There must be a way to do it quickly. By accomplishing that high priority task, the doctoral study domain would fulfill the crucial performance indicator, and ensure</p>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		for acquiring their enabling certificate, based on their scientific results within the past five years		the necessary research-intensive environment.
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.	The indicator is fulfilled.	
16.	PI *	B.1.2.1. Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.	The indicator is fulfilled.	
17.	PI	B.1.2.2. The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission does not exceed 30%.	The indicator is fulfilled.	
18.	PI	B.2.1.1. The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.	The indicator is fulfilled.	
19.	PI	B.2.1.2. At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.	The indicator is fulfilled.	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	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.	The indicator is fulfilled.	
21.	PI	B.2.1.4. All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.	The indicator is fulfilled.	
22.	CPI	B.2.1.5. For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1.	The indicator is fulfilled.	
23.	CPI	B.3.1.1. For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain	The indicator is fulfilled.	
24.	PI *	B.3.1.2. The ratio between the number of presentations of doctoral students who completed their doctoral studies within the evaluated period (past 5 years), including posters, exhibitions made at prestigious international events (organized in the country or abroad) and the number of doctoral students who have completed their doctoral studies within the evaluated period (past 5 years) is at least 1.	The indicator is fulfilled.	
25.	PI *	B.3.2.1. The number of doctoral theses allocated to one specialist coming from a higher education institution, other than the	The indicator is fulfilled.	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor.		
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.	The indicator is partially fulfilled.	This is probably the new criterion and the the Doctoral School has not pay attention on it. It should not be some problem to manage that.
27.	PI	C.1.1.1. The Doctoral school in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory: a) the scientific work of Doctoral advisors; b) the infrastructure and logistics necessary to carry out the research activity; c) the procedures and subsequent rules based on which doctoral studies are organized; d) the scientific activity of doctoral students; e) the training program based on advanced academic studies of doctoral students; f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.	The indicator is fulfilled.	
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.	The indicator is fulfilled.	

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
29.	CPI	<p>C.2.1.1. The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:</p> <ul style="list-style-type: none"> a) the Doctoral School regulation; b) the admission regulation; c) the doctoral studies contract; d) the study completion regulation including the procedure for the public presentation of the thesis; e) the content of training program based on advanced academic studies; f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data; g) the list of doctoral students within the domain with necessary information (year of registration; advisor); h) information on the standards for developing the doctoral thesis; i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation. 	<p>The indicator is fulfilled.</p>	
30.	PI	<p>C.2.2.1. All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of their thesis.</p>	<p>The indicator is fulfilled.</p>	
31.	PI	<p>C.2.2.2. Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.</p>	<p>The indicator is fulfilled.</p>	
32.	PI	<p>C.2.2.3. All doctoral students have access to scientific research laboratories or other facilities depending on the specific domain/domains within the Doctoral School, according to internal order procedures.</p>	<p>The indicator is fulfilled.</p>	
33.	PI *	<p>C.3.1.1. IOSUD, for every evaluated domain, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study,</p>	<p>The indicator is fulfilled.</p>	<p>This performance indicator can relatively easily be fulfilled by attending conferences. However, a research intensive</p>

No.	Type of indicator (PI, PI *, CPI)	Performance indicator	Judgment	Recommendations
		<p>aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.</p>		<p>university/doctoral school has to put emphasis on research training of doctoral students. Additional efforts are always expected to ensure funds, and introduce policies and measures aiming at increasing the duration of doctoral students' internships in advanced laboratories of the internationally recognised scientific institutions. International collaborations would also help in establishing fruitful environment for long-term internships. The later would additionally contribute to doctoral supervisors' international visibility.</p>
34.	PI	<p>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.</p>	<p>The indicator is fulfilled.</p>	<p>It would be useful and attractive for doctoral students to intensify collaboration with research training mobility, but also to invite leading international experts to deliver courses/lectures in the scope of doctoral study programme.</p>
35.	PI	<p>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.).</p>	<p>The indicator is fulfilled.</p>	<p>It would be necessary to intensify international collaboration in which doctoral students actively participate. Additional efforts are recommended to enhance international visibility of the Doctoral School of Integrative Biology and to attract doctoral candidates from neighbouring countries.</p>



VI. Conclusions and general recommendations

The Doctoral School of Applied Sciences, with the Doctoral Study Domain of Biology, is based on regulations that comply with the national laws and legal provisions. It has all the necessary logistical resources and research infrastructure to provide research training for doctoral students. There is one prominent supervisor with outstanding productivity and superb international visibility. He has made exceptional effort to develop his research area and succeed in reaching high-impacted journals in the biology discipline that is not impacted much. Altogether, he would be wishful researcher at much more prominent university. However, there is a general problem with the supervisors' team, thus a recruitment of younger academic staff would be urgent. The Doctoral School has to find a way to do it quickly. By accomplishing that high priority task, the doctoral study domain would fulfill the crucial performance indicator, and ensure the necessary research-intensive environment. Additional efforts are also expected towards improvement of all the aspects of internationalisation, including students' long-term research trainings abroad, and recruitment of both foreign students and teachers or guidance-committees members.

As three (3) performance indicators have been assessed as partially fulfilled (*A.1.3.3.; *A.3.2.2.; *B.3.2.2.), and the critical performance indicator (A.3.1.1.) has also been assessed as being partially fulfilled, the Doctoral Domain of Biology, in the scope of the Doctoral School of Applied Sciences at the Ovidius University of Constanța

VII. Annexes

The following types of documents shall be attached:

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

Zagreb, December 06, 2021.

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