

Annex No. 3

The External Evaluation Report of the Chemistry Doctoral Study Domain

“DUNĂREA DE JOS” UNIVERSITY OF GALAȚI

Preliminary report by
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I. Introduction¹

The report shows the details and conclusions obtained by the International Expert during the online evaluation of the Chemistry domain in the PhD Doctoral Field. The online meetings took place during the week July 12-16 2021 with the schedule shown in Annex VII.1.

The expert's committee was composed by:

- Prof. Aurel Cui, coordinator of the evaluation panel
- PhD student Bianca Cernusca
- Prof. Jordi Villà-Freixa, international expert

II.1 The doctoral studies at “Dunărea de Jos” University of Galați

ARACIS has classified “Dunărea de Jos” University of Galați (from now on, UDJG) within the category of education and scientific research universities. In December 2018, the university obtained the certification according to the SR EN ISO 9001:2015 standard for research, development and innovation activities carried out at the university, faculties and research units' levels, accredited at the institutional level (see <http://www.ugal.ro/cercetare>).

“Dunărea de Jos” University of Galați is an institution organizing doctoral studies (IOSUD), carried out in 16 doctoral fields, under the coordination of 101 doctoral supervisors. During the 90's, the doctoral studies were organized in the branches of Technical Science, Chemistry, Economics and Literature, including, at that time, 34 specializations provided in the Nomenclature of doctoral specialties. The original 42 teaching staff members having the status of supervisors helped developing fields like Biotechnology, Naval Hydromechanics and naval structures, Machine Manufacturing, Fishing Technique, Industry Economy, Machine tools and integrated machine tools, Technology and equipments in food industry or Literature Theory. The story afterwards for these fields is varied, in some cases they become a reference at the national level.

By the Rector's decision no. 1940/12.09.2012, it was decided that the 3rd cycle of doctoral studies would be organized in two schools: School for Doctoral studies in Engineering and School for Doctoral studies in Socio-human sciences. The university's Senate approves in 2017, by Senate Decision 62/15.06.2017, the reorganization of the School for Doctoral Studies in Engineering in two schools: School for Doctoral studies in Mechanical and Industrial Engineering and School for Doctoral studies in Fundamental and Engineering Sciences, and in 2018, the School for Doctoral studies in Biomedical sciences is established.

Currently, the doctoral programs, counting 101 supervising professors, include 16 different fields of study, including: medicine, chemistry, biotechnologies, food engineering, engineering and management in agriculture and rural development, industrial engineering, mechanical engineering, electrical

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



engineering, systems' engineering, computers and information technology, materials engineering, economics, management, philology, history, sports and physical education science.

1.2 The School for Doctoral Studies in Fundamental and Engineering Sciences

The School for Doctoral Studies in Fundamental and Engineering Sciences, carries out programs at the 3rd cycle, counting a total of 33 doctoral supervisors, for the following fields of study:

- Chemistry
- Materials Engineering
- Electrical Engineering
- Food engineering
- Biotechnologies
- Engineering and management in agriculture and rural development.
- Computers and information technology
- Systems engineering.

Members of The Council of the School for Doctoral Studies in Fundamental and Engineering Sciences:

- Prof. Dr. Eng. Gabriela RAPEANU, Director
- Prof. Dr. Eng. Constantin APETREI
- Prof. Dr. Chim. Geta CARAC
- Prof. Dr. Eng. Marian GAICEANU
- Prof. Dr. Eng. Dr. Ec. Silviu STANCIU
- Prof. Dr. Eng. Camelia VIZIREANU
- Student drd.eng. Nina-Nicoleta CONDURACHE (LAZAR)

Honorary members:

- Prof.Dr. Philippe MARCUS, Laboratoire de Physico-Chimie des Surfaces, CNRS- ENSCP (UMR 7045). Ecole Nationale Supérieure de Chimie de Paris, Chimie ParisTech. Université Pierre et Marie Curie Paris, France
- Prof. Dr. Natasa POKLAR ULRIH, Biotechnical Faculty, University of Ljubljana, Slovenia.
- Prof. PhD., MSc. Rodica-Mariana ION, CNATDCU Member - Ministry of National Education, ICECHIM Bucharest, Materials Engineering Department, Nanomaterials Group - Valahia University of Targoviste.



According to the information provided by the university, in 2021, there are 98 doctoral students enrolled to doctoral studies in the fields of the School for Doctoral studies in Fundamental and Engineering Sciences, 61 of them enrolled students with tuition fee paid by the state. Also, between 2015-2020, 45 doctoral students obtained the title of doctor, their doctoral thesis being validated by the specialised committee of CNATDCU.

The educational effectiveness at the level of School for Doctoral studies in Fundamental and Engineering Sciences is certified by the fact that there were no thesis unapproved by the General Committee of CNATDCU, the advanced research students' activity being recognized through many publications in national and international magazines in the field.

Details on the research infrastructure and the different research services were introduced through several documents presented in the SER.

1.3 The field of doctoral studies in Chemistry

The field of doctoral studies CHEMISTRY is part of the School for Doctoral studies in Fundamental and Engineering Sciences. According to the MEN Order 6129/2016 regarding the minimum necessary and mandatory standards, the field of doctoral studies in Chemistry falls under Annex 9 - Chemistry Committee (CNATDCU).

The Chemistry Domain is part of the Doctoral School of Sciences, and counts 3 doctoral supervisors:

- Prof. Dr. chem. habil. Constantin Apetrei
- Prof. Dr. chem. habil. Rodica-Mihaela Dinică
- Prof. Dr. Martine Demeunynck

All doctoral supervisors have publications indexed in Web of Science, with impact factor, and other achievements, with relevance for the field of Chemistry, and have had international visibility in the last 5 years, as members of the scientific committees of international conferences.

The Chemistry Domain currently has 11 students, and 1 in suspension.

II. Methods used

The evaluation panel for the Chemistry Domain participated in all online meetings organized by the commission at the UDJG. This report is ground on the information gathered in these meetings as well as in the information provided in the self evaluation report (SER), which is very complete and allows for the comparison of the different fields within the doctoral school.

Many of the limitations detected in the evaluation report may be corrected by further promoting openness of the organization in terms of international and industrial relationships.

As stated by the schedule in Section [VII. 1. Detailed schedule of the visit](#) the meetings were organized by the commission with the several stakeholders of the chemistry doctoral study domain:

- 1) doctoral students,



- 2) school officials,
- 3) doctoral advisors,
- 4) representatives of the Council of the Doctoral School, the Quality Assessment and Assurance Commission, the Quality Assurance Department, the Ethics Commission

As the program does not yet have graduates, some meetings that took place in other domains with the PhD graduates and their employees were skipped during the evaluation of the Chemistry domain.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

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

Standard A.1.1.

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

Performance Indicator A.1.1.1.

The existence of specific regulations and their application at the level of the Doctoral School of the respective university doctoral study domain:

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

Description

The SER contains a detailed description of the different items requested to be fulfilled by this Indicator. In particular:

- The organization and functioning of the doctoral studies at IOSUD – UDJG is done according to the Institutional regulation concerning the organization and functioning of the doctoral studies

within the schools for doctoral studies from UDJG, adopted by the Senate Decision number 12 from 10.04.2014.²

- The schools for doctoral studies within IOSUD-DJUG carry out their activity according to the Regulation of the Schools for doctoral studies from IOSUD-DJUG, approved by the HCA no. 18/5.03.2021 and by the Senate Decision number 84 from 16.03.2021.
- The Council for doctoral studies (CSUD) of IOSUD-DJUG was established according to the Methodology for carrying out the process of establishing the Council for doctoral studies (CSUD) of IOSUD-DJUG, approved by the Senate Decision number 115 from 4.09.2020. Together with the methodology, the Calendar of the process for establishing the Council for doctoral studies (CSUD) of IOSUD-DJUG was approved.
- The management structures of the Schools for Doctoral Studies of IOSUD-DJUG were established, according to the Calendar of the process for organizing and executing the selection and election the management structures of the Schools for doctoral studies from IOSUD – UDJG, adopted by the Senate Decision number 66 from 22.07.2017
- The competition for the position of director of the Council for Doctoral Studies (CSUD) of IOSUD - UDJG was organized and conducted according to the Methodology for conducting the competition for the position of director of the Council for doctoral studies of IOSUD - "Dunărea de Jos" University of Galați, adopted by the Senate Decision number 77 on 14.04.2020. All the information related to the development of the Public Competition for the position of Director of the Doctoral Studies Council (CSUD) can be found in the university's website.
- The composition of the competition committee, as well as the operational procedure for the online support of the competition for the position of CSUD director were approved by the Senate Decision no. 80 on April 29, 2020.
- The admission of students to doctoral studies is made according to the Methodology regarding the organization and development of the admission to the third cycle of university doctoral studies, approved by the Senate Decision no. 74 on April 10, 2020:
- Information about the required documents, locations and registration program, as well as competition program, topics and necessary bibliography are available on IOSUD website: <http://www.ugal.ro/studii/doctorat/admitere-doctorat>
- The completion of doctoral studies is done according to the Regulation on the organization and development of the completion of doctoral studies within the Schools for Doctoral Studies of IOSUD-UDJG, approved by HCA no. 18 / 05.03.2021 and approved by the Senate Decision number 84 on March 16, 2021.
- The public presentation of the doctoral thesis is made in accordance with the Code of doctoral studies (HG no. 681/2011, HG no. 134/2016 for amending and supplementing the Code of doctoral studies), the Methodology regarding the public support of the doctoral thesis at IOSUD

² <http://www.ugal.ro/studii/doctorat/regulamentul-privind-organizarea-studiilor-universitare-de-doctorat>.

- UDJG, approved by the Senate Decision number 140 on September 29, 2020, Procedure for organizing and developing the public meeting to present the doctoral thesis in UDJG, approved by the Council for doctoral studies (CSUD) on May 09, 2016 and the Procedure for online presentation of doctoral theses in UDJG, approved by the Senate Decision number 80 on April 29, 2020.

- The necessary information for the preparation of the documents required for the public presentation of the doctoral thesis is available on the IOSUD website.
<http://www.ugal.ro/studii/doctorat/sustinere-publica-teza-doctorat-legislatie-si-formulare>
- The supervision activity of doctoral students within IOSUD - UDJG is provided by 101 doctoral supervisors. The number of doctoral supervisors can be changed through the affiliation / disaffiliation process which is regulated by the UDJG.IOSUD - 001 Procedure regarding the granting and revocation of the membership of the Schools for doctoral studies within IOSUD - "Dunărea de Jos" University of Galați, approved by the Council for doctoral studies (CSUD) of IOSUD - UDJG on January 14, 2019 and by the habilitation process which is regulated by the Methodology regarding the organization and development of the process for obtaining the habilitation certificate within "Dunărea de Jos" University of Galați (IOSUD- UDJG), approved by the Senate Decision number 140 on September 29, 2020 and the Procedure for the online presentation of the habilitation theses, approved by the Senate Decision number 87 on May 21, 2020.
- The automatic recognition by "Dunărea de Jos" University of Galați of the quality of doctoral supervisor, obtained in university institutions accredited abroad is regulated by the Methodology regarding the automatic recognition by "Dunărea de Jos" University of Galați of the quality of doctoral supervisor, adopted by the Senate Decision number 142 on November 29, 2018, drawn up according to the Order on the recognition of the quality of doctoral supervisor, issued by the Ministry of National Education and Scientific Research number 5921 on December 06, 2016.
- UDJG has mechanisms for equivalence of the doctoral degree and the doctoral degree in sciences or in a professional field, obtained abroad. The methodology respects the principle of legality, university autonomy, transparency, accountability, as well as the ethical and deontological norms in force.
- The activity of IOSUD - UDJG is subject to an internal evaluation process, in accordance with the Methodology for self-evaluation of the activity of IOSUD-UDJG, adopted by the Senate Decision no. 102 from April 02, 2021.
- The activity of schools for doctoral studies within IOSUD - UDJG is subject to an internal evaluation process, in accordance with the Methodology of self-evaluation of IOSUD-UDJG activity and the activity of schools for doctoral studies within IOSUD-UDJG, adopted by the Senate Decision no. 102 from April 02, 2021.

- The internal evaluation process complies with the Calendar of conducting the evaluation process of doctoral studies, in order to accredit doctoral fields and school for doctoral studies within IOSUD - UDJG, adopted by the Senate Decision number 75 on February 26, 2021.
- The internal evaluation reports of the schools for doctoral studies are public and can be consulted on the IOSUD website.³
- The operative management of the schools for doctoral studies is ensured by the Doctoral School Council and its director. The composition of the Councils of the four schools for doctoral studies is publicly available.
- Doctoral students enrolled in the first year are required to complete the program of advanced university training and documentation. This program is based on a curriculum specific to each school for doctoral studies, approved by the Board of Directors of "Dunărea de Jos" University of Galați and approved by the Senate Decision number 160 on November 24, 2020, available on the IOSUD website. Students enrolled in the form of budget education with scholarship carry out teaching activities too (4-6 hours / week). The advanced university training and documentation program is carried out according to the schedule available on the IOSUD website.

Analysis

Based on the facts and after the online meetings, it was made clear that the Chemistry Domain is embedded in a working Doctoral School with the proper regulatory framework.

Recommendations

The indicator is fulfilled

Performance Indicator A.1.1.2.

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

Description

Extracted from the SER:

The organization and development of the affiliation process and the granting of the quality of member of a School for Doctoral Studies within IOSUD-UDJG is done according to the procedure UDJG.IOSUD of 8.10.2019 - point 4.2⁴

According to art. 7.4. of the Institutional Regulation on the organization and functioning of doctoral studies in the School for Doctoral Studies at the "Dunărea de Jos" University of Galați, the School for

³ <http://www.ugal.ro/studii/doctorat/raportul-de-evaluare-interna-al-scolilor-doctorale>

⁴ https://www.ugal.ro/files/doctorat/2019/ProceduraRevocareMembruCSUD_151019.pdf

Doctoral Studies in UDJG provide doctoral students training programs based on advanced university studies, consisting of activities carried out in institutionalized formations study, through courses, seminars, laboratories and the like. The opportunity to organize an advanced university training program, as well as its structure and content are established by the School for Doctoral Studies, based on the proposals of the doctoral supervisors, and the School for Doctoral Studies is obliged to ensure free and unrestricted access to the advanced training program within the School for Doctoral Studies or within other School for Doctoral Studies.

CSD and CSUD propose mandatory criteria, procedures and standards aimed at changing the doctoral supervisor of a certain doctoral student and conflict mediation procedures (art. 3.17, paragraph 5),⁵ as well as for the conditions under which the doctoral program may be interrupted (art 3.18). According to art. 4.7. the duration of the doctoral program established by law can be extended by 1-2 years, with the approval of CSUD-UDJG, of the University Senate, at the proposal of the doctoral supervisor, with self-financing. Also, doctoral studies may be interrupted for good reasons, for a maximum of 2 years. The duration of these studies is extended with the cumulative periods of the approved interruptions, and the provided extensions and interruptions are established by additional documents to the doctoral studies contract.

The doctoral supervisors are responsible together with the authors of the doctoral theses for the observance of the quality and professional ethics standards, including for ensuring the originality of the content. The anti-plagiarism procedure within the "Dunărea de Jos" University of Galați is observed, related to the originality of the content of the doctoral theses, according to the Code of Ethics and Professional Deontology of UDJG, Code C-REC-01 / Ed.1-Rev.1 and the General Procedure : Using the Plagiarism System. (art. 4.4).

UDJG participates in the project "Ensuring national electronic access to scientific literature to support and promote the research and education system in Romania (ANELIS PLUS" –PNII project–CAPACITIES, Module I, Large Infrastructures CD submitted by the ANELIS Plus Association, based on the subsidiary contract no. 21264 / 31.08.2017 (UDJG), 54/12.09.2017 (Anelis Plus) to the Financing Agreement No. 1/Axa 1/18.07.2017 in order to implement the project no. code My SMIS 2014+: 102839 entitled „National electronic access to scientific literature to support the research and education system in Romania – ANELIS PLUS 2020, within the POC-Axis 1-CDI program, concluded by the Association of Universities, Research-Development Institutes and Central University Libraries in Romania (ANELIS PLUS) with the "Dunărea de Jos" University of Galați (contributing member ANELIS PLUS), for a period of 60 months (2017-2022). Under this contract, access to the following databases is ensured – Derwent Innovations Index, Thomson Reuters – Web of Science, Thomson Reuters – Journal Citation Reports, and 2000 e-book titles from all fields that can be accessed in full text, in the ANELIS PLUS National Depository at: <https://dspace.anelisplus.ro/xmlui/>. During 2016-2020 there were 1608401 accesses to online scientific databases.

CSD and CSUD propose criteria, procedures and standards regarding the obligations regarding the frequency and activities of doctoral students. The form of conducting doctoral studies is frequent. The

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<http://www.ugal.ro/studii/doctorat/regulamentul-privind-organizarea-studiilor-universitare-de-doctorat>



necessary effective presence of the doctoral student is decided by the doctoral supervisor, depending on the specifics of the doctoral program and in compliance with the provisions of the School for Doctoral Studies Regulations.

Analysis

The regulatory framework is clear and the university complies with the requirements.

Recommendations

The indicator is fulfilled

Standard A.1.2.

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.

Description

According to the SER, UDJG owns an information system for the record of doctoral students and their academic career, as well as the data on their supervisors. The program interface is interactive and allows the introduction of new data, the modification of existing ones, as well as the generation of the main reports, in RTF and Excel format. Extensive graphical information on the way the system works is provided in the SER.

Analysis

The requirements based on the Ministry Order for Doctoral Studies are accomplished in terms of the IT system.

Recommendations

The indicator is fulfilled

Performance Indicator A.1.2.2.

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

Description

According to the SER, UDJG ensures the verification of the authenticity and originality of doctoral theses and other scientific papers with the help of the www.sistemantiplagiat.ro software, recognized by the National Council for Attesting Titles, Diplomas and Certificates (CNATDCU), according to art. 2 of the Ministry of Education (MEN) Order No. 3485 of 04.04.2016.



Analysis

The anti plagiarism tools are in place and are used effectively.

Recommendations

The indicator is fulfilled

Standard A.1.3.

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

Performance Indicator A.1.3.1.

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

Description

Doctoral supervisors within the field of doctoral studies CHEMISTRY coordinated between 2016-2020 the implementation of 8 research grants, won at national and international contests, 4 of these grants being won between 2016-2020. All research grants approach relevant themes for the field of study CHEMISTRY, and doctoral students take part in these activities (Annex A.1.3.2_2_Finantare doctoranzi prin granturi).

The list of grants coordinated by doctoral supervisors is presented in Annex A.1.3.1_1_ Lista granturi conducatori doctorat and in Annexes A.1.3.1_2_Granturi conducatori doctorat, evidence for the mentioned information can be checked.

Analysis

The competitiveness of the Domain supervisors is clear and they have been very active in finding external sources of funding to support their research and the research of their PhD students.

Recommendations

The indicator is fulfilled

Performance Indicator *A.1.3.2.

The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by

individual persons or by legal entities, or who are financially supported through research or institutional / human resources development grants is not less than 20%.

Description

11 doctoral students carried out their activity between 2016-2020 in the Chemistry domain, of which 7 in stage, 3 in extension and 1 interrupted his studies. The number of doctoral students financed / who were financed for a period of at least six months by research or institutional development / human resources grants is 6 (out of 11), which represents 54,5% (Annex A.1.3.2_1_Lista doctoranzilor sustinuti financiar prin granturi).

During the academic year 2020-2021 within the field of doctoral studies CHEMISTRY, 11 doctoral students carry out their activity. From the 7 doctoral students in stage, a number of 3 were/are financially supported for a period of at least 6 months through research grants or institutional development / human resource, which represents 42%; (Annex A.1.3.2_1_Lista doctoranzilor sustinuti financiar prin granturi).

Evidence regarding the financial support of the doctoral students by research and institutional development grants is also given.

Analysis

Taking into account that in the evaluated period, 11 doctoral students were enrolled, and 6 of them are beneficiaries of funding sources other than government funding, it results that the proportion of doctoral students benefiting from funding sources other than government funding is larger than 20%.

Recommendations

The indicator is fulfilled

Performance Indicator *A.1.3.3.⁶

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

Description

According to the data shown in Annex A.1.3.3_Centralizare cheltuieli doctoranzi din incasari, that includes the amounts related to doctoral grants obtained by the university through institutional contract

⁶ The indicators marked with an asterisk (*) hold a special status, referring exclusively to the evaluation of doctoral studies domains, as per Article 12 from the annex No.1 of the Order of the minister of education No. 3651/12.04.2021 approving the Methodology for evaluating university doctoral studies and the system of criteria, standards and performance indicators used in the evaluation. In case they are not met, the Agency extends a period of maximum 3 years to IOSUD to correct the respective deficiencies.

and tuition fees collected from doctoral students in the form of paid education and the amounts spent for the professional training of doctoral students for the years 2015-2020, the amount collected during 2015-2020 within the Chemistry field is 563.800 lei and the expenses 87,600 lei, which means a percentage of 15,45%.

Analysis

From the data provided it seems clear that such reimbursement is fulfilled. However, additional efforts should be put in place to ensure the training of the PhD students.

Recommendations

The indicator is fulfilled.

Criterion A.2. Research infrastructure

Standard A.2.1.

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

Performance Indicator A.2.1.1.

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

Description

According to the information provided in the SER, IOSUD-UDJG and SD-SFI have a research infrastructure that very well supports the development of activities specific to doctoral studies.

The PORTAL OF RESEARCH UNITS at <http://unicer.ugal.ro/index.php/ro/> includes the research units that carry out research, development and innovation (CDI) and university creation activities, in fundamental fields organized at national level, with the mission to develop fundamental and applied research, in accordance with the University's Research - Development - Innovation Strategy, with permanent alignment with CDI strategies at national and international level.

The research infrastructure endowed by IOSUD - UDJG and of the School for Doctoral studies in Fundamental and Engineering Sciences (research equipment, software packages) including the year of acquisition or development, can be consulted in the annexes:

Annex A.2.1.1_1_Infrastructura IOSUD-UDJG



Annex A.2.1.1_2_Echipamente_software_calculatoare_achizitii 2018-2020

Annex A.2.1.1_3_Obiecte de inventar_achizitii 2018-2020.

Analysis

The field of doctoral studies of Chemistry has at its disposal sufficient infrastructure to conduct its research and development activities.

Recommendations

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

Standard A.3.1.

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

Performance Indicator A.3.1.1.

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

Description

Within the doctoral field of Chemistry, 3 doctoral supervisors carry out their activity and 2 of them are employed full-time and meet the minimum CNATDCU standards in force at the time of the evaluation, necessary and mandatory for obtaining the certificate of habilitation.

Analysis

The number of doctoral supervisors who have activity in the field of Chemistry and meet the minimum standards of National Council for Attesting the Academic Titles, Diplomas and Certificates (CNATDCU), in force at the time of the evaluation, is 3, although one of the professors is external and it would be advisable, for the sake of giving continuity to the program, to incorporate new supervisors within the program.

Recommendations

The indicator is fulfilled

Performance Indicator *A.3.1.2.

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

Description

Of the 3 doctoral supervisors in the field of Chemistry, 2 are full-time professors at the IOSUD.

Analysis

Clear fulfilment

Recommendations

The indicator is fulfilled

Performance Indicator A.3.1.3.

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

Description

According to the data provided in the SER, the subjects in the training program based on advanced university studies are supported by professors who have the quality of doctoral supervisor or qualified or professor with proven expertise in the field of taught subjects. To demonstrate that, the filling of vacancies in the list of positions related to the Curriculum for the academic year 2020-2021 is presented in Annex A.3.1.3_1_Stat funcții cursuri SD-SFI 2020-2021 and the CVs of professors who take courses within SD-SFI are presented in the folder A.3.1.3_2_CV_titulari curs.

The experience of the course postholders is very well related to the subject taught, all doctoral supervisors having a rich and recognized scientific activity at international and national level.

Analysis

The criteria is clearly fulfilled.

Recommendations

The indicator is fulfilled

Performance Indicator *A.3.1.4.

The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs⁷ does not exceed 20%.

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

Description

According to the SER, there were no situations in which a doctoral supervisor coordinated at the same time more than 8 students or 12 in the period 2016-2020. More precisely, within the doctoral field Chemistry, the maximum number of doctoral students coordinated by a doctoral supervisor between 2020-2021 is 6 (Annex A.3.1.4_2_Centralizator conducatori doctorat Chimie).

Analysis

The indicator is clearly fulfilled.

Recommendations

The indicator is fulfilled

Standard A.3.2.

The Doctoral advisors within the domain are carrying out a scientific activity 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 awareness within the past five years, consisting of: membership on scientific boards of international publications and conferences; membership on boards of international professional associations; guests in conferences or expert groups working abroad, or membership on doctoral defense commissions at universities abroad or co-leading with universities abroad. For Arts and Sports and Physical Education Sciences, doctoral thesis advisors shall prove their international visibility within the past five years by their membership on the boards of professional associations, membership in organizing committees of arts events and international competitions, membership on juries or umpire teams in artistic events or international competitions.

Description

All doctoral supervisors within the field of study CHEMISTRY have at least 5 indexed publications Web of Science in magazines with impact factor, most of them situated in Q1 and Q2 areas (red and yellow). The list of relevant publications (selection of 5 articles for each doctoral supervisor) is presented in Annex A.3.2.1_1_Lista publicatii ISI conducatori de doctorat, while the whole publications can be checked in the folder Annex A.3.2.1_2_Publicatii ISI conducatori doctorat.

The average H-index in Web of Science is 11, and they are members of the scientific committees of international publications and conferences (Annex A.3.2.1_3_Vizibilitate internationala).

paragraph (3) of the Code of doctoral studies approved by the GD No. 681/2011 with subsequent amendments and additions.



Analysis

Doctoral supervisors have publications indexed in the Web of Science, with impact factor, and other achievements, relevant to the Field of Chemistry.

Recommendations

The indicator is fulfilled.

Performance Indicator *A.3.2.2.

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

Description

According to the information provided in the SER, all doctoral supervisors within the field of CHEMISTRY have realized, based on the last 5 years scientific results, at least 25% of the required score of the CNATDCU minimum standards for habilitation (Annexes A.3.2.2_1_Centralizare_fise verificare_Chimie 2016-2020). The calculation sheets from which these information have been extracted can be checked in the Annex file Annexes A.3.2.2_2_Fise verificare_Chimie 2016-2020.

Analysis

As seen in the table below, 100% of the doctoral supervisors in the Field of Chemistry meet the CNATDCU minimum standards, at least 25%, through scientific performance in the last 5 years.

Despite this, the number of PhD supervisors is limited and it would be advisable to promote a strategy to contract new professors, if possible, with international projection to ensure a proper continuity of the PhD Domain.

Recommendations

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

Description

According to the information provided (Annex B.1.1.1_Absolventi masterat din alte universitati), the average ratio between the number of master's degree candidates from other educational institutions in the country or abroad who registered for admission to doctoral studies in the last 5 years and the number of seats financed from the state budget within SD-SFI is $0.48 > 0.20$.

Analysis

The data shows fulfillment. However, due to the low number of PhD students and professors the risk to unfulfill the indicator in the future is high. We recommend strategic development of the domain, in order to ensure a sustainable future. Better engagement with industry and more proactive search of international candidates is highly recommended.

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

Description

According to the SER and to the meetings with the Domain members, candidates for doctoral admission are assessed according to the level of training and information in the field, the ability to address specific research problems, to formulate innovative solutions and the quantifiable results of eventual previous scientific research. Candidates are also assessed according to their ability to argue the innovative nature of the proposed research topic, in relation to the current state of research in the chosen thematic field and the specialized bibliography, highlighting personal contribution to the doctoral topic selected in the agreement with the doctoral supervisor (art. 18 (2) of Annex C.1.1.1.c6_Metodologie admitere



doctorat). The admission procedure includes an oral test (art 18 (1) in Annex C.1.1.1.c6_Metodologie admittere doctorat).

Analysis

The procedure for selecting new PhD students is clear, follows, in general and without getting into the details, the OTM-R principles.

Recommendations

The indicator is fulfilled

Performance Indicator B.1.2.2.

The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission⁸ does not exceed 30%.

Description

Within the doctoral field CHEMISTRY there weren't any expulsions/dropout of the doctoral students, 3 years after the admission.

Analysis

The dropout rate is 0%.

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

Description

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

The curriculum and subjects sheets from the doctoral study program of the School for Doctoral studies in Fundamental and Engineering Sciences are described in Annex B.2.1.1_1_Plan invatamant SD-SFI and Annex B.2.1.1_2_Fise discipline SD-SFI, respectively.

The curriculum contains 3 relevant subjects for the preparation of doctoral students in scientific research: Academic writing for the fields of technical sciences and research project management, English for scientific and engineering purposes and Scientific research ethics and academic integrity.

Analysis

The indicator is clearly fulfilled

Recommendations

The indicator is fulfilled

Performance Indicator B.2.1.2.

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

Description

The curriculum on the basis of which the doctoral study program is carried out within the School for Doctoral studies in Fundamental and Engineering sciences, contains the subject Scientific research ethics and academic integrity.

Analysis

The indicator is clearly fulfilled

Recommendations

The indicator is fulfilled

Performance Indicator B.2.1.3.

The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities⁹.

Description

⁹ Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology of 17 March 2017 regarding inscription and registration of higher education qualifications in the National Register of Qualifications in Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.

As stated in the SER, the files of the courses in the curriculum specify the competencies, responsibility and autonomy acquired by the doctoral students after completing the related training program. The courses' sheets are analyzed and approved by the SD-SFI Committee. The reports for approving the subject sheets are presented in Annex B.2.1.3_1_Avizare fise discipline. The internal quality assurance mechanisms are achieved through specific actions at the level of IOSUD-UDJG, and implicitly of the School for Doctoral studies in Fundamental and Engineering Sciences, as well as at the level of doctoral fields within SD-SFI.

After admission, for each doctoral student, the Individual program of doctoral studies 2018 – 2020/2022 IOSUD – UDJG is filled in (Annex B.2.1.3_2_Program studii doctorat SD-SF), approved by the Senate Decision no. 142 from 29/11/2018, information available on IOSUD website. Doctoral students enrolled in the first year must follow the advanced university training and documentation program, carried out based on a curriculum (Annex B.2.1.1_Plan de invatamant SD- SFI) and according to the Schedule specific to every school for doctoral studies and approved by the Senate Decision no. 160 from 24/11/2020, available on IOSUD website.

Doctoral students enrolled at the School for Doctoral studies in Fundamental and Engineering Sciences can also enroll in courses that are part of the advanced training program of other schools for doctoral studies. The activity of each doctoral student is monitored through the Annual Activity Report of the doctoral student (Annex B.2.1.3_3_Raport anual activitate al studentului doctorand), adopted by Senate Decision no. 142 from 29/11/2018.

Analysis

Chemistry doctoral students acquire professional and transversal competencies, and learning outcomes are clearly stated. The indicator is clearly fulfilled.

Recommendations

The indicator is fulfilled

Performance Indicator B.2.1.4.

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

Description

As stated in the SER, doctoral students within the doctoral field CHEMISTRY benefit during their entire stage of doctoral preparation from the advice and guidance of a supervision committee, according to the Schedule in Annex B.2.1.4_2_Orar consultatii indrumare. The positions of members of supervision committees are presented in Annex B.2.1.4_1_State functii indrumare.

The functionality of the supervision committees is proven by the protocols of the presentation of the scientific reports in front of the supervision committees and by the protocols drawn up on the occasion



of the presentation of the doctoral theses in front of the supervision committees. (Annex B.2.1.4_3_Dovezi indrumare).

A precise evidence of the interaction between the doctoral student and the supervision committee are student's publications together with the members of such committee. For the field of study Chemistry, two students have been chosen, one completed his doctoral program in the last 5 years and one is still following his program, for which the mutual articles of the doctoral student together with the supervision committee are presented in Annex B.2.1.4_4_Lista publicatii comune doctoranzi-indrumatori.

Analysis

The perception from the visit is that, despite the low number of supervisors, the students find suitable supervision and will fulfill the requirements of the PhD.

Recommendations

The indicator is fulfilled.

Performance Indicator B.2.1.5.

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

Description

The ratio between the number of doctoral students (ns) and the number of university teachers/researchers providing guidance (nc) is ns:nc = 11:7 and does not exceed 3:1.

Analysis

The number of PhD students is not excessive for the size and shape of the teaching staff and researchers providing guidance to them. The structure of the Domain is balanced, although clearly small, which may hinder its sustainability in the future if new professors are not incorporated.

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.**

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

Description

The criterion does not apply because during the last five years within the doctoral field of study CHEMISTRY, no student presented the doctoral thesis.

Analysis

It does not apply.

Recommendations

The indicator does not apply

Performance Indicator *B.3.1.2.

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

Description

The criterion does not apply because during the last five years within the doctoral field of study CHEMISTRY, no student presented the doctoral thesis.

Analysis

It does not apply

Recommendations

The indicator does not apply

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.

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

Description

The criterion does not apply because during the last five years within the doctoral field of study CHEMISTRY, no student presented the doctoral thesis.

Analysis

It does not apply

Recommendations

The indicator does not apply

Performance Indicator *B.3.2.2.

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

Description

The criterion does not apply because during the last five years within the doctoral field of study CHEMISTRY, no student presented the doctoral thesis.

Analysis

It does not apply

Recommendations

The indicator does not apply

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 in the respective university study domain shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the IOSUD, the following assessed criteria being mandatory:

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

Description

The IOSUD-UDJG website contains all regulations concerning the School for Doctoral studies in Fundamental and Engineering Sciences.¹⁰ In particular:

- a. SD-SFI has implemented internal monitoring mechanisms regarding the scientific activity of the doctoral supervisors:
 - 1. procedure regarding the awarding and withdrawal of the title of member of the schools for doctoral studies within IOSUD-UDJG;
 - 2. annual self-assessment procedure of the doctoral supervisors, and corresponding sheet and results;
- b. the Operational Procedure Control of the Laboratory Equipments (COD PO 7.6-01, Annex 3_Proceduri calitate UDJG), and the Research Center SICECAPC endowment ensure the functioning of the infrastructure and logistics necessary to carry out the research activity. (Annex A.2.1.1_4_Infrastructura SICECAPC).
- c. the procedures covering the process of enrollment until completion of the doctoral studies are well-defined and available on IOSUD-UDJG website:
 - 1. The Institutional regulation for organising and carrying out the doctoral studies was adopted by Senate Decision no. 12 from 10/04/2014 (Annex A.1.1.1.a1_Regulament institutional doctorat).

¹⁰

<https://www.ugal.ro/studii/doctorat/scoli-doctorale/scoala-doctorala-de-stiinte-fundamentale-si-ingineresti>

2. The regulation of schools for doctoral studies within IOSUD-UDJG was adopted by Senate Decision no. 84 from 16/03/2021, being available for consultation on IOSUD website (Annex A.1.1.1.a2_Regulamentul scolilor doctorale).
 3. The initiation regulation regarding the approval, monitoring and regular evaluation of the study programs was approved by the Senate Decision no. 3 from 21/01/2019 (Annex C.1.1.1.c3_Regulament initire monitorizare programe).
 4. The self-assessment methodology of IOSUD-UDJG and schools for doctoral studies activity within IOSUD was approved by Senate Decision no. 102 from 02/04/2021 (c4_Metodologie autoevaluare IOSUD_Scoli doctorale).
 5. The regulation regarding the organization and development of the completion of doctoral studies within the Schools for Doctoral studies within IOSUD-UDJG was adopted by Senate Decision no. 84 from 16/03/2021 (Annex A.1.1.1.d2_Regulament finalizare studii doctorale).
 6. The methodology regarding the organization and development of the admission to the third cycle of doctoral studies, adopted by the Senate Decision no. 91 from 12/06/2020 (Annex A.1.1.1.d1_Metodologie admitere doctorat). https://admitere.ugal.ro/ords/f?p=100:504:::P504_LINK:1. The internal evaluation reports of the quality of the doctoral study programs, of the performances of the doctoral supervisors and of the doctoral students is performed annually, being coordinated by an internal evaluation commission, appointed annually by CSUD, at the proposal of CSD. Finally, the annual internal evaluation reports of the Schools for Doctoral studies within IOSUD-UDJG are approved by the university's Senate. In the file Annex C.1.1.1.c_Rapoarte evaluare interna SD-SFI there are presented the reports in the last 4 years.
- d. On the scientific activity of doctoral students, the School for Doctoral studies in Fundamental and Engineering Sciences (SD-SFI) is part of IOSUD – UDJG and has implemented internal monitoring mechanisms regarding the scientific activity of doctoral students. This includes:
1. SD-SFI has a self-assessment procedure of doctoral students (Annex C.1.1.1.d1_Procedura autoevaluare doctoranzi).
 2. Doctoral students fill in annually the Self-assessment sheet (Annex C.1.1.1.d2_Fisa autoevaluare doctoranzi SD-SFI)
 3. IOSUD-UDJG has implemented the Operational procedure regarding the extension periods for the doctoral student's activity (Annex C.1.1.1.d3_Procedura alocare perioade extindere doctoranzi).
- e. an Internal monitoring and evaluation of the study programs procedure, including doctoral studies (Annex C.1.1.1.c3_Regulament initire monitorizare programe) and a Methodology of self-assessment of IOSUD-UDJG activity and schools for doctoral studies' activity within IOSUD (Annex C.1.1.1.c4_Metodologie autoevaluare IOSUD_Scoli doctorale) are in place.

- f. social and academic assistance facilities (including those for participating at various events, publishing articles, etc.) and counseling are available for doctoral students.

Analysis

Based on the information provided, as well as the interviews carried out during the site visit, the QA system is in place. A culture of quality, evaluation and quality assurance in a process-based approach, based on the Quality Management System, which it is constantly improving, is established at the UDJG, in accordance with the requirements of European Standards and Guidelines for Quality Assurance (ESG).

Better quality enhancement procedures are encouraged, though, in order to ensure checkbox listing of QA items is considered as enough to guarantee the quality of the programs.

Recommendations

The indicator is fulfilled.

Performance Indicator *C.1.1.2.

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

Description

A feedback mechanism from the doctoral students at the School for Doctoral Studies in Fundamental and Engineering Sciences has been implemented. in order to identify the needs of doctoral students and the level of satisfaction regarding the doctoral program as a whole:

1. The activity of doctoral students is annually evaluated by the doctoral supervisor by filling in the Assessment Sheet by the doctoral supervisor (Annex C.1.1.2.a1_1_Fisa evaluare doctorand de catre conducatori doctorat).
2. The activity of doctoral supervisors is annually evaluated by the SD-SFI management (Annex C.1.1.2.a2_1_Fisa de evaluare conducatori doctorat de catre SD-SFI).
3. The doctoral students evaluate the doctoral supervisors on the basis of Operational Procedure for the evaluation of doctoral supervisors by the doctoral students (Annex C.1.1.2.a3_1_Procedura evaluare conducatori doctorat-doctoranzi, Annex C.1.1.2.a3_2_Chestional evaluare conducatori doctorat-doctoranzi).

The Assessment sheets of the doctoral students by the doctoral supervisors, the Evaluation



sheets of the doctoral supervisors' activity by the SD-SFI management, and the processing of the questionnaires of evaluation of the study programs by the doctoral students are presented in different annexes. The analysis of these documents led to an action plan for continuous development of administrative and academic services (Annex C.1.1.2.a3_4_Plan de masuri SD-SFI).

Analysis

The PhD feedback mechanisms are in place, but it would be good to analyze what are the indicators that the IOSUD uses to boost such continuous development of the administrative and academic services.

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.

The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as:

- (a) the Doctoral School regulation;*
- (b) the admission regulation;*
- (c) the doctoral studies contract;*
- (d) the study completion regulation including the procedure for the public presentation of the thesis;*
- (e) the content of training program based on advanced academic studies;*
- (f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as their institutional contact data;*
- (g) the list of doctoral students within the domain with necessary information (year of registration; advisor);*
- (h) information on the standards for developing the doctoral thesis;*
- (i) links to the doctoral theses' summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.*

Description

A collection of web sites and documents was provided to the evaluators:

- a. school for doctoral studies regulation (adopted by Senate Decision no. 84 from 16/03/2021), available for consultation at:

https://www.ugal.ro/files/hotarari/hs/2021/HS_84_din_16_3_2021_Annex_2_Regulament_scoli_doctorale.pdf

- b. admission regulation, according to the Methodology of organising and the development of admission to the third cycle of doctoral studies (adopted by Senate Decision no. 91 from 12/06/2021), available for consultation at:

<https://www.ugal.ro/studii/doctorat/admitere-doctorat>
https://admitere.ugal.ro/ords/f?p=100:504:::P504_LINK:1

- c. doctoral studies contracts with tuition fee paid by the state and with scholarship, tuition fee paid by the state but without scholarship and students with fee are available at:

<https://www.ugal.ro/studii/doctorat/contracte-cadru-studii-doctorale>

- d. the regulation for completing the studies which includes the procedure for the public presentation of the thesis (adopted by Senate Decision no. 84 from 16/03/2021), available at:

<https://www.ugal.ro/studii/doctorat/sus%C8%9Binere-public%C4%83-tez%C4%83-doctorat-legisla%C8%9Bie-si-formulare>
https://www.ugal.ro/files/hotarari/hs/2021/HS_84_din_16_3_2021_Annex_3_Regulament_finalizare_studii_doctorale.pdf

- e. the content of study programs: Curriculum 2020-2021 (approved by Senate Decision no. 160 from 24/11/2020), available for consultation at:

https://www.ugal.ro/files/doctorat/scoala%20doctorala/2021/SDSFI_2020-2021_Plan_invatamant-201209.pdf

- f. The scientific profile and the research themes of the doctoral supervisors from the school for doctoral studies, as well as their institutional contact data can be checked at:

https://www.ugal.ro/files/doctorat/scoala%20doctorala/2021/SDSFI_2020-2021_Conducatori_doctorat_210125.pdf
https://www.ugal.ro/files/doctorat/scoala%20doctorala/2021/SDSFI_2020-2021_Teme_cercetare_Domeniul_Inginerie_Electrica.pdf

- g. The list of doctoral students from the school with basic information (enrollment year; doctoral supervisor), based on an efficient computer system for doctoral students records and their scholar situation, through Secretariat for Doctoral Studies (room U 134) and Secretariat for Schools for Doctoral Studies (room AN 002).
- h. Information regarding the drafting standards of the doctoral thesis. In particular, the typing, indexing and printing of the doctoral thesis publicly presented within IOSUD- UDJG is made according to the Guide for typing, indexing and printing of the doctoral thesis, adopted by



CSUD members in the meeting from 27/09/2013 and approved in the Administration Committee meeting no. 44 from 1/10/2013.

<https://www.ugal.ro/studii/doctorat/sus%C8%9Binere-public%C4%83-tez%C4%83-doctorat-legisla%C8%9Bie-si-formulare>

- i. The links to doctoral theses summaries which are to be publicly presented, as well as date, hour and the place where they will be presented, at least 20 days before presentation.

<http://www.ugal.ro/studii/doctorat/sustineri-publice-teze-doctorat>

Analysis

Complete information is transparently provided in the website

Recommendations

The indicator is fulfilled

Standard C.2.2.

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

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

Description

Based on the information provided in the SER, we learn that the online access to scientific resources for the research within the university is assured on the basis of the project no. code My SMIS 2014+: 102839 entitled „ National Electronic Access to scientific literature for the support of education and research system from Romania – ANELIS PLUS 2020, within the program POC-Axa 1-CDI, concluded with the Universities Associations, Research-Development institutes and Central Universities' Libraries from Romania (ANELIS PLUS), on 60 months (2017- 2022). On the basis of the aforementioned contract the access to data basis is assured: ScienceDirect, Scopus, SpringerLink, Clarivate Analytics (Derwent Innovations Index, Web of Science și Journal Citation Reports), granting access to students, teaching staff and employees of UDJG.

The library's website highlights the access of doctoral students, from the Intranet and from distance, and to the e-books purchased within the Anelis Plus 2020 (3007 titles) and Expert (107 titles) projects. These have been cataloged and can also be found in the Koha integrated library system (books purchased from De Gruyter and Elsevier are being cataloged).

<https://biblioteca.ugal.ro/index.php/ro/resurse/carti-electronice>

<https://biblioteca.ugal.ro/index.php/ro/resurse/depozitul-digital-anelis-plus>

<https://biblioteca.ugal.ro/index.php/ro/e-servicii/accesul-de-la-distanta-la-bazele-de-date>



Additional information can be checked at: Annex C.2.2.1_Acces platforma baza de date.

Analysis

Good and standard online access to research oriented databases

Recommendations

The indicator is fulfilled

Performance Indicator C.2.2.2.

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

Description

The University has a subscription to use the platform www.sistemantiplagiat.ro to verify the authenticity of doctoral theses and other scientific papers through which doctoral students have access, upon request and with the consent of the doctoral supervisor, when verifying the degree of similarity with other existing scientific or artistic creations.

Analysis

Acces is guaranteed to students, although the request for permission by the doctoral supervisor is somehow unnecessary and can lead to some problems. It is suggested to avoid such permission to access the resource.

Recommendations

The indicator is fulfilled.

Performance Indicator C.2.2.3.

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

Description

All doctoral students are granted access to scientific research laboratories within the Research Centers mentioned at the criterion A.2.1.1. Doctoral students within the field of CHEMISTRY carry out activities within the European Center for Environment and the Romanian Center for Modeling Recirculating Aquaculture Systems MoRas. The regulations regarding the organisation and functioning were approved by the Senate Decision no. 71 from 13/07/2017 and no. 54 from 27/04/2017, and are presented in Annex C.2.2.3_1_ROF ECEE și Annex C.2.2.3_2_ROF MoRas.

Doctoral students benefit from access to services (tests) made within the Command-based electron microscopy laboratory. (Annex C.2.2.3_3_Comanda SEM).

Analysis

The infrastructure is correct for the size of the PhD domain, although it can limit its growth.

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.

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

Description

According to the SER, 100% of doctoral students within the field of Chemistry who carry out their activity during the academic year 2020-2021 had participations to scientific conferences (Annex C.3.1.1_1_Participari conferinte doctoanzi in stagi).

IOSUD-UDJG and respective SD-SFI and the field CHEMISTRY have concluded agreements within Erasmus+ K103 program, both for studies mobilities (Annex C.3.1.1_3_Oferta generala Erasmus+ K103 studii doctorat), and for employment/practice (Annex C.3.1.1_4_Oferta practica Erasmus+ K103 studii doctorat).

Annex C.3.1.1_5_Mobilitați doctoranzi reveals the centralised situation of SD-SFI of the number of mobilities of which the doctoral students in the form of education state-budget benefited between 2015-2020; for the doctoral field CHEMISTRY, the 11 doctoral students from the state budget benefited of 4 mobilities (36%).

Analysis

It is encouraged to take profit of the margin given to complete this indicator in order to improve the internationalization of the students.

Recommendations



The indicator is fulfilled

Performance Indicator C.3.1.2.

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

Description

According to the SER, During the Scientific Conference of the School for Doctoral Studies within UDJG, first rank experts were invited and they lectured for the doctoral students (Annex C.3.1.2_1_CSSD).

Analysis

The level of internationalization of the study program is limited, as only relationships with specific partners abroad have been exploited. It appears that the university could take profit of the potential of their professors in order to improve this mobility and ensure cotutelles or similar relationships with universities abroad.

Recommendations

The indicator is partially fulfilled

Performance Indicator C.3.1.3.

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

Description

According to the SER, IOSUD-UDJG and respectively SD-SFI have and apply a strategy to increase the degree of internationalization of doctoral studies, according to Annex C.3.1.3_1_Geneva and Annex C.3.3_2_Conferinta Asociatiei Europene pentru Educate Internationala, but also

<http://www.ugal.ro/anunturi/stiri-si-evenimente/5707-universitatea-dunarea-de-jos-din-galati-promoveaza-invataman-tul-superior-romanesc-la-geneva>

<http://www.ugal.ro/anunturi/stiri-si-evenimente/4503-universitatea-dunarea-de-jos-din-galati-participa-la-conferinta-asociatiei-europene-pentru-educatie-internationala>

Analysis

We strongly encourage analyzing in a critical way this item, producing a much more international oriented research and training for the PhD students, as this will definitely benefit the whole Domain.

Recommendations

The indicator is partially fulfilled

IV. SWOT Analysis

<u>Strengths:</u> -well structured program -good enough research infrastructures -good supervisors in terms of publications and research resources	Weaknesses: -lack of internationalization -not being able yet to show results of PhD thesis -low impact of the research at the university within the regional development
<u>Opportunities:</u> -willing by the supervisors to demonstrate a good level of research and commitment to internationalization -the relationship with the industrial environment seems to be only opportunistic and may have a lot of possibilities of expansion	Threats: -a lack of ambition in internationalization will become problematic in terms of future success (and survival) of the domain

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (*, C)	Judgement	Recommendations
A.1.1.1		fulfilled	
A.1.1.2		fulfilled	
A.1.2.1		fulfilled	
A.1.2.2		fulfilled	
A.1.3.1		fulfilled	
A.1.3.2	*	fulfilled	
A.1.3.3	*	fulfilled	
A.2.1.1	C	fulfilled	
A.3.1.1	C	fulfilled	
A.3.1.2	*	fulfilled	
A.3.1.3		fulfilled	
A.3.1.4	*	fulfilled	
A.3.2.1	C	fulfilled	
A.3.2.2	*	fulfilled	

B.1.1.1	*	fulfilled	
B.1.2.1	*	fulfilled	
B.1.2.2		fulfilled	
B.2.1.1		fulfilled	
B.2.1.2		fulfilled	
B.2.1.3		fulfilled	
B.2.1.4		fulfilled	
B.2.1.5	C	fulfilled	
B.3.1.1	C	fulfilled	
B.3.1.2	*	---	no PhD students finished in the last 5 years
B.3.2.1	*	---	no PhD students finished in the last 5 years
B.3.2.2	*	---	no PhD students finished in the last 5 years
C.1.1.1		fulfilled	
C.1.1.2		fulfilled	
C.2.1.1	C	fulfilled	
C.2.2.1		fulfilled	
C.2.2.2		fulfilled	
C.2.2.3		fulfilled	
C.3.1.1	*	fulfilled	
C.3.1.2		partially fulfilled	identify the number of cotutelles as a good indicator of improved internationalization
C.3.1.3		partially fulfilled	The IOSUD is encouraged to improve the internationalization of the program

VI. Conclusions and general recommendations

In general, the health of the Chemistry Domain at this Doctoral School is very good. The program is very small in terms of students and professors, but well structured, well balanced with all indicators in place and only minor corrections regarding internationalization. This is, only Section C.3 needs some special attention, as this evaluator found limited internationalization in the program, which does not match the potential and passion showed by the supervisors and the good infrastructure of the labs. The topics the supervisors work in are of particular interest for the new Horizon Europe program, and it is recommended that the institution makes a strategic move towards internationalizing the research, in order to take profit of such opportunity and to position itself as a reference in the fields of major expertise of their professors. This will benefit both the program and the students.

The profile of the professors is good and very proactive to train students, but a balance should be made between the production of external indicators and the strategy of the institution to ensure it produces the best researchers and professionals in the chemistry field.



Overall, though, and based on the performance of the university related to the proposed indicators, the behaviour is good and only minor corrections are suggested, as listed in the table in section [V. Overview of judgments awarded and of the recommendations](#).

VII. Annexes

VII. 1. Detailed schedule of the visit

The complete schedule was more complex, but due to the characteristics of the Chemistry PhD Domain, in which no graduates have been awarded yet, some of the meetings that other domains had in the schedule were not in place for us.

Date	time	Activity
July 12th	09:00-09:45	Online preliminary meeting for the preparation and harmonization of evaluation steps, in hybrid mode, of doctoral study domains and IOSUD
	10:00-10:45	Online meeting with representatives of the institution and of the Council for Academic Doctoral Studies (CSUD)
	11:00-12:30	Online meeting with the contact person for the doctoral study domain under review and the team who drafted the internal evaluation report
	14:30- 15:30	Online meeting with the academic staff corresponding to the doctoral study domain
July 13th	9:00-10:00	Online meeting with the members of the Ethics Commission
	10:15-11:15	Online meeting with the Commission for Quality Evaluation and Assurance (CEAC) members / Quality Assurance Department
	11:30-12:30	Online meeting with PhD students
July 14th	12:30-13:30	Online meeting with the Directors/ persons in charge of the research centers/laboratories within the doctoral study domain
	13:30-14:30	Online meeting with Doctoral Schools Council (CSD members)
July 15th	9:45-18:00	Face-to-face working meetings, visiting the educational and research infrastructure
July 16th	11:30-12:30	Online meeting for conclusions
	12:30-13:30	Meeting with representatives of the institution under review to discuss on the conclusions of the evaluation process and the main recommendations