

The External Evaluation Report of a Doctoral Study Domain

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I. Introduction¹

In this chapter, the following shall be summarized:

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

This report corresponds to a request from ARACIS for the periodic external evaluation of the Doctoral School of Geology of the University of Bucharest.

The activities, stages and methodology for the evaluation procedures of doctoral studies are as described in the article 158 para (4) of the Law of National Education n° 1/2011; the Government's Emergency Ordinance n° 75/2005 on quality assurance in education, approved by Law n° 87/2006; the Ministerial Order n° 3200/2020 on the Methodology for the evaluation of doctoral university studies and the systems of criteria, standards and performance indicators used in the evaluation and the Guides on conducting the periodic external evaluation process of doctoral schools and doctoral study domains, developed by ARACIS. This evaluation report describes how the standards are met and provides additional suggestions for improving the program.

To carry out the external evaluation, ARACIS appointed an external committee consisting of the following members:

External evaluation committee. Domain: GEOLOGY

Coordinator: Prof. Dr. IANCU Ovidiu

Universitatea "Al. I.Cuza" din Iasi

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



International expert: Prof. Dr. RIDUSH Bogdan Yuriy Fedkovych Chernivtsi National University, Ukraine

PhD student: Ailenei Vasile

Universitatea "Petro-Gaze" din Ploiești

Members of the External Evaluation Committee (EEC) reviewed and examined the accreditation reports provided by the Doctoral School of Geology of the University of Bucharest. The reports were evaluated individually before the remote site visit on 22-26 November 2021.

Although the first doctoral dissertation in the University of Bucharest was defended in 1905, the doctoral studies within doctoral schools according to the Bologna system started in 2005, within a legal framework adopted by Law 288/2004 and the Government Decision no.567/2005. The Doctoral School of Geology (DSG), that provides the field of PhD studies in geology, was founded in 2005, as a department of the Faculty of Geology and Geophysics in the University of Bucharest.

The Doctoral School of Geology includes a Council (Prof. Mihai Emilian Popa, Dr. marin Palcu and Drd. Florin Nache), a Secretary (Mrs. Cornelia Hanganu), and have 19 doctoral supervisors and their PhD students.

In the evaluation period from 2016 to 2020, the school had 19 PhD supervisors and 63 students, with a maximum 11 students per one supervisor.

II. Methods used

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

- The analysis of the internal evaluation report of the doctoral study domain under review and its Annexes;

- The analysis of documents made available by the IOSUD, in physical format, during the evaluation visit (if such documents have been requested);

- The analysis of documents, data and information available on the IOSUD/Doctoral School(s) website, in electronic format;

- Visiting the buildings included in the institution's property, comprising (indicative and non-exhaustive list, which shall be changed according to the context):

- classrooms;

- laboratories;

- the institution's library;

- research centers;

- the Career Counselling and Guidance Center;

- lecture halls for students;

- the student residences;

- the student cafeteria;

- sports ground etc.;

- Meeting/discussions with doctoral students in the doctoral study domain under review;

- Meeting/Discussions with the graduates of the doctoral study domain under review;



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

The report is based on next sources:

1) An internal evaluation report for PhD studies in Geology drafted following the Order no. 3651/12.04.2021 on approving the Methodology for evaluating PhD studies and systems of criteria, standards and performance indicators used in the evaluation. This self-assessment report was prepared by the director of the DSG, Professor Mihai Emilian Popa, and Cornelia Hanganu, PhD, secretary of this doctoral school.

2) The EEC had access to all documentation corresponding to the evaluation process through a restricted access authorisation to the ARACIS cloud, including reports and documentation to prepare for the remote site visit.

3) The remote visiting of classrooms and laboratories via video clips provided by the IOSUD.

4) A five-days online meeting as a virtual visit at University of Bucharest in November 2021.

Several key persons were interviewed, including:

- representatives of the institution and the Council for Academic Doctoral Studies,
- Commission for Quality Evaluation and Assurance (CEAC) members
- members of the Ethics Commission
- Doctoral Schools Council (CSD members)
- director of the Doctoral School,
- the team responsible for the internal evaluation report,
- academic staff corresponding to the doctoral study domain
- persons in charge of the research centers/laboratories
- employers' representatives,
- PhD students and graduates of the doctoral study.

The EEC received answers to open questions based on reading the accreditation reports. In addition, the EEC received answers to identified open questions during the remote site visit and substantial additional insights about the operation, structure and plans of the Doctoral School.



III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

**general description of domain analysis.*

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

**general description of the criterion analysis.*

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.

**general description of the standard analysis.*

The documentation analysis indicates that the DSG has the appropriate legal mechanisms to function correctly and respond to the university community. In 2005, normative regulations were created to organize the doctoral degree as the third cycle of university studies. As a result, University of Bucharest started developing regulations and policies for the organization and implementation of doctoral studies following the Bologna system. Doctoral studies are organized by the University of Bucharest Institute for Doctoral Studies as stipulated by the National Education Law No. 1/2011, the Government Decision No. 681/2011 regarding the approval of the Code of doctoral studies, and the University of Bucharest Regulation regarding the organization and the carrying out of the doctoral studies.

The University is committed to safeguarding society's priorities regarding quality standards, providing sustainable institutional frameworks to promote and enhance the quality of academic programmes, ensuring service transparency, and encouraging diversity and innovation through the Quality Policy based on quality principles. These organizational culture's objectives and components ensure individualization of University of Bucharest and its adherence to the fundamental quality assurance principles in the European Higher Education Area.

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The DSG provide adequate evidence. They have established regulations and protocols that ensure a high level of management and have described in <https://sdg.gg.unibuc.ro/en/regulations/>.

The Council of Doctoral Studies has developed the Regulation for organising and conducting doctoral studies is being developed and updated regularly. The Regulation for organising and conducting doctoral studies at the University of Bucharest, in effect at the time of the internal evaluation, was adopted by Senate Decision of 23 September 2020 and is available for consultation on the website: <https://sdg.gg.unibuc.ro/wp-content/uploads/2021/11/Regulament-UB-doctorat-2020-09-23.pdf>.

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The institution includes all criteria, procedures and standards in its regulations, and they are available for consultation on the website: <https://sdg.gg.unibuc.ro/wp-content/uploads/2021/11/Regulament-UB-doctorat-2020-09-23.pdf>.

The indicator is **fulfilled**.

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

**general description of the standard analysis.*

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



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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Doctoral students' records and their entire activity within the doctoral research programme are preserved in personal files on paper and in electronic format. The Institute for Doctoral Studies staff stores data about doctoral students' doctoral programmes, using the following logistical resources: AcademicInfo and the Single Matriculation Register (rei.gov.ro).

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The University of Bucharest has been checking the similarity percentage of doctoral theses since 2013. Since 2016, all doctoral dissertations have been verified under the National Law. Currently, two IT programmes in the institution are certified by Ministers Order 3485/2016, Turnitin and SistemAntipalgat.ro.

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.*

**general description of the standard analysis.*

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.



During the period evaluated, 2016-2020 PhD students in the field of Geology have benefited from 26 projects included in the self-assessment report submitted by the DSG.

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The table given by DSG includes shows that between 2016-2020, out of 93 doctoral students, 63 were financed from the budget. Only 4 PhD students (6.34%) among 63 active in 2020, received funding from sources besides government funding, for at least 6 months.

Recommendations: To increase the part of doctoral students receiving additional financial support for their research. Also, to simplify the applying procedure for funding or give the PhD students more assistance in the funding applying procedures.

The indicator is **partially fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

As it is written in the self-assessment report of the DGS, the University of Bucharest is in process of gradual expansion of the financing fundings means of the doctoral students' professional development. From the total amount of 2.6 million RON of doctoral grants obtained by the university through institutional contracts and of tuition fees in 2019, only near 8400 RON were spent in the same year, and near 44750 RON out of 1125600 RON (3,98%) during 2016-

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.



2019 (according to the Supplementary Report of the DSG). In 2020 were no mobilities, due to the COVID-19 pandemic.

Recommendations: To increase the reimbursement of professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of speciality papers or other specific forms of dissemination etc.).

The indicator is **partially fulfilled**.

Criterion A.2. Research infrastructure

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

DSG has laboratories including Laboratory of Geochemistry, Laboratory of thin and polish sections, Laboratory of Systematic Mineralogy, Laboratory of Sedimentology and Petrology, Laboratory of FT-IR Microscopy, Laboratory of Paleomagnetism and Rockmagnetism, Laboratory of Micropalaeontology, Palynology, Paleobotany and Palaeoecology, Laboratory of Palaeobotany and Palynology, Laboratory for processing palaeontological samples, Laboratory for processing geological samples, Laboratory of doctoral and master students, Laboratory of Palaeontology, Laboratory of General Geology, Laboratory of Geology of Romania and of Coal Geology, Laboratory of Oil Geology, Laboratory of Oil Geology and Engineering, Laboratory of Exploration and Extraction, Laboratory of Geomechanics, Laboratory of Drilling and Mining works, Laboratory of Engineering Geology and Hydrogeology, Laboratory of Geophysical Data Interpretation, Laboratory of Environmental Geology, Laboratory of Geophysical Informatics, Laboratory of Earth Physics, Laboratory of Electrometry, Laboratory of Borehole Geophysics, Laboratory of Seismic Prospections, Laboratory of Remote Sensing, Laboratory of Topography, Laboratory of Gravimetry and Magnetometry, Laboratory of Seismology, Laboratory of Expertise and Consulting Geology.

Equipment bought during the last five years: Rock and minerals processing laboratory, polarizing optical microscopes, gear for granulometry analyses through sieving, gear for direct fracturing, odometer, caesium magnetometer.



The infrastructure of the Department of Geology of the University of Bucharest provides the analytical expertise necessary to complete the PhD student's thesis projects.

The indicator is **fulfilled**.

Criterion A.3. Quality of Human Resources

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

19 doctoral supervisors are active in the field of Geology doctoral studies. Ten of them have work contracts. Three of them meet the minimum standards of the National Council for Attestation of University Degrees.

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

TheDSG has five active members with permanent working contracts and five associate members with temporary working contracts.

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

All 19 Members of the Doctoral School of Geology are professors or CS I lecturers. They have a profound influence in their research fields, and many of them represent pioneers of Romanian Geology, with broad international recognition.

The indicator is **fulfilled**.

Performance Indicator *A.3.1.4. *The percentage of doctoral thesis advisors who concomitantly coordinate more than 8 doctoral students, but no more than 12, who are themselves studying in doctoral programs³ does not exceed 20%.*

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Among 19 thesis advisors of the DSG, only one coordinates 11 doctoral students, and others do not reach 8 PhD students per advisor. None of the advisors is studying themselves in doctoral programs.

The indicator is **fulfilled**.

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

**general description of the standard analysis.*

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*

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



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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The doctoral supervisors develop an intensive research activity. Ten of them, more than 50%, have enough publications in journals listed in Web of Science and Scopus databases.

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Almost all supervisors of the DSG earned more than 25% of the score requested by the minimal CNATDCU standards for the last five years.

The indicator is **fulfilled**.

Domain B. EDUCATIONAL EFFECTIVENESS

**general description of domain analysis.*

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

**general description of the criterion analysis.*

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.

**general description of the standard analysis.*

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



contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Among the 46 admitted PhD students, 16 candidates graduated from other universities, so they represent 0.35%. For the DSG the ratio is 0.35. Three graduates of masters' programs are from other faculties, and 13 graduated from other universities.

The indicator is **fulfilled**.

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

**general description of the standard analysis.*

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The admission for the DSG is based on the graduation results for Bachelor of Science and Master degrees; results of an interview in front of the admission committee and of the doctoral supervisors of the DSG; the number of research papers published by the candidates. The admission methodology of the DSG is available on the site: <https://sdg.gg.unibuc.ro/wp-content/uploads/2021/11/Metodologie-admitere-Scoala-Doctorala-de-Geologie-2021.pdf>

The indicator is **fulfilled**.

Performance Indicator B.1.2.2. The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission⁴ does not exceed 30%.

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

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



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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

During 2016-2020 only six PhD students abandoned their studies during the first three years, representing 11.54% out of 52 admitted candidates.

The indicator is **fulfilled**.

Criterion B.2. The content of doctoral programs

**general description of the criterion analysis.*

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.

**general description of the standard analysis.*

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The topics covered by the disciplines studied in the in-depth university program are relevant for the preparation of PhD students' research. The disciplines intended to study in-depth the research methodology and/or the statistical data processing are also present in the training program („Scientific writing”, „Methods of research and statistics”).

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The curriculum contains the discipline „Ethics and Academic Deontology”.

The indicator is **fulfilled**.



Performance Indicator B.2.1.3. *The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities⁵.*

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Through its doctoral supervisors, the DSG ensures the training and the scientific development of the research abilities of doctoral students. The mechanisms controlling this quality include compulsory courses, transversal courses, exams, essays and presentations according to the individual plans (PPI) and joint activities between supervisors and students.

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The doctoral students of the DSG are supported by an advisory panel consisting of three members with the Doctor title. The advisory panel defines and monitors the doctoral students' research programme. The supervising commission always includes experts in the specific research field.

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

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



The DSG has 19 doctoral supervisors and 63 doctoral students. During 2016-2020, 93 doctoral students were supervised, while 148 faculty members of the Faculty of Geology and Geophysics, external of the DSG, and 81 members not employed by the University of Bucharest, Faculty of Geology and Geophysics, were teaching at the DSG. This implies the ratio of 229/93, giving the ratio 2.46/1.

The indicator is **fulfilled**.

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

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The files placed in cloud.aracis.ro presents the papers of PhD students in the field of Geology who obtained the degree of Doctor in the evaluated period. Most of the papers presented are of a high scientific level and originality. Some of them are published in leading scientific journals in Geology.

For a more detailed examination of their content, the next five papers have been selected:

- **Lea Rausch**, Hülya Alçiçek, Amélie Vialet, Nicolas Boulbes, Serdar Mayda, et al. (2019) An integrated reconstruction of the early Pleistocene palaeoenvironment of *Homo erectus* in the Denizli Basin (SW Turkey). *Geobios*, Elsevier, 57, pp.77-95. <10.1016/j.geobios.2019.10.003>. <hal-02415801>
- **Dorina Alina Dragut**, Gehrig Schultz, **Victor Mocanu**. Effects of Seismic Data Acquisition on the Environment – RomSeis Project. *International Journal of Environmental Protection and Policy*. Vol. 4, No. 3, 2016, pp. 44-48. doi: 10.11648/j.ijepp.20160403.11
- L. Besutiu, **M. Diaconescu**, L. Zlagnean, A. Craiu, (2018) Structural and geodynamic considerations on the Galati-Izvoarele seismic-prone area. *Pure and Applied Geophysics (PAAG)*, pp.1-31, <https://doi.org/10.1007/s00024-018-1956-0>
- **Ovidiu N. Dragastan**, Claudia Antoniadă& Marius Stoica. Biostratigraphy And Zonation Of The Lower Cretaceous Carbonate Succession From Cernavodă-Lock Section, South



Dobrogea, Eastern Part of the Moesian Platform (Romania). *Carpathian Journal of Earth and Environmental Sciences*, February 2014, Vol. 9, No. 1, p. 231 - 260

- **Tuan Hoang Van & Gheorghe C. Popescu.** Depositional Environment During Holocene of the Red River Delta, Northern Vietnam, *Carpathian Journal of Earth and Environmental Sciences*, August 2019, Vol. 14, No. 2, p. 301 - 310; DOI:10.26471/cjees/2019/014/081

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The 22 doctoral students who defended their doctoral theses gave 129 presentations at international conferences during the evaluated period. The ratio is 5,86:1.

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.

**general description of the standard analysis.*

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

According to the documentation examined, there were no external reviewers on the doctoral thesis defence evaluation committee dealing with more than two theses coordinated by the same doctoral supervisor during the same year.

The indicator is **fulfilled**.

Performance Indicator *B.3.2.2. *The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the*



doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The average ratio for 2016-2020 between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defence on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school is 0,24.

The indicator is **fulfilled**.

Domain C. QUALITY MANAGEMENT

**general description of domain analysis.*

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

**general description of the criterion analysis.*

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.

**general description of the standard analysis.*

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

(a) the scientific work of Doctoral advisors;

(b) the infrastructure and logistics necessary to carry out the research activity;

(c) the procedures and subsequent rules based on which doctoral studies are organized;

(d) the scientific activity of doctoral students;

(e) the training program based on advanced academic studies of doctoral students;

(f) social and academic services (including for participation at different events, publishing papers etc.) and counselling made available to doctoral students.

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.



The DSG has a proper Operational Procedure regarding the evaluation and internal monitoring of the quality assurance within the University of Bucharest. The Committee for Quality Evaluation and Insurance, the Department of Quality Management (DQM), the Department of Curricular Development and Qualification, the Committee for Quality Evaluation and Insurance, the Council for University Doctoral Studies (CUDS), the Doctoral Schools Council establish the strategy and specific requirements for the implementation and development of the Quality Management System within the University.

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

The University of Bucharest Statistics Department annually analyses the professional trajectory of graduates at certain intervals following graduation and on student and teaching staff satisfaction. These analyses are carried out on each study cycle, field and programme and target many aspects of the graduates' professional life.

The indicator is **fulfilled**.

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

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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

(a) the Doctoral School regulation;

(b) the admission regulation;

(c) the doctoral studies contract;

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

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

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



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

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

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

All information specified in paragraphs f-i is published on the Internet. Information is available on the website: <https://sdg.gg.unibuc.ro/en/>. Also, information is posted on the website of Faculty of Geology and Geophysics, at <https://gg.unibuc.ro> and on the website of all doctoral schools of University of Bucharest, at <http://doctorat.unibuc.ro/scoli-doctorale/scoala-doctorala-de-geologie/>.

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.

**general description of the standard analysis.*

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

All doctoral students have free access to a platform of academic data bases relevant to the organised doctoral fields. Through the ANELIS Plus programme, doctoral students have free access to a platform of academic data bases, crucial for research. The full list of electronic resources the University of Bucharest is currently subscribed to comprises the following databases : American Chemical Society, CEEOL, Cambridge Journals, Emerald Management Journals 200, JSTOR, MathSciNet, Nature Journals, PROQUEST Central, SAGE HSS Collection, ScienceDirect Freedom Collection – Elsevier, Scopus – Elsevier, SpringerLink Journals – Springer, Web of Science - Core Collection, InCites Journal Citation Reports, Derwent Innovations Index - Clarivate Analytics, Wiley Journals.

The indicator is **fulfilled**.



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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Since the academic year 2018/2019, doctoral students can access one of the electronic systems of similarity control used by the University of Bucharest under the conditions stipulated in the Procedures on the use of the similarity control electronic system by doctoral students of the University of Bucharest (<https://doctorat.unibuc.ro/studii-universitare-de-doctorat/>).

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

All PhD students of the DSG have access to research laboratories and to all necessary research equipment.

The indicator is **fulfilled**.

Criterion C.3. Internationalization

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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



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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Only 20,34% of have completed a training course abroad or other mobility forms.

The indicator is **partially fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Under this clause of requirements, the following activities were fulfilled: the one international co-supervising of the thesis by Ms. Lea Rausch, and several talks given by foreign professors and international experts.

The indicator is **fulfilled**.

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

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

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

Recommendations:

The indicator is fulfilled/partially fulfilled/not fulfilled.

Faculty members participated to international education fairs.

The indicator is **fulfilled**.

IV. SWOT Analysis

| | |
|--------------------------|---------------------------|
| <u>Strengths:</u> | <u>Weaknesses:</u> |
|--------------------------|---------------------------|

| | |
|--|---|
| <p>- the strengths identified throughout the report will be resumed as part of the indicators' analysis. Other general strengths that do not fall within a particular indicator may be formulated.</p> <ul style="list-style-type: none"> • The university has a strong international reputation supported by its education and research quality. • The teaching staff is high-quality, qualified, and well-trained, having highly scientific capacity. • The doctoral supervisors are mainly prominent researchers and represent numerous scientific schools with solid research traditions. • The doctoral students are well trained and acquire a high level of scientific competence. • The graduates have a high rate of employability, both in research and industry. • There is excellent and productive communication between supervisors and students. • The possibilities of international mobility and international scientific cooperation allow DSG students to integrate into the global science context. • The university offers sufficient facilities for accommodating more PhD students. • The doctoral school has a low drop-out rate. | <p>- 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.</p> <ul style="list-style-type: none"> • The insufficient part of doctoral students receives additional financial support for their research. • Insufficient percent of funding for doctoral programs is spent on professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers etc.). • Only few of the research laboratories received new equipment during the last five years. • The quantity of the doctoral thesis advisors that meet the the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) are at the minimum and should be increased. |
| <p style="text-align: center;"><u>Opportunities:</u></p> <p>- 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.</p> <ul style="list-style-type: none"> • There are few PhD schools in Geology in Romania, but the research institutions and industry can accept more graduates. • By developing English-speaking PhD programs, the University can attract Master | <p style="text-align: center;"><u>Threats:</u></p> <p>- 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> <ul style="list-style-type: none"> • The relatively low number (50%) of doctoral supervisors younger than 65 years old, with permanent working contracts, and the natural decline of the older |

| | |
|---|--|
| <p>programs' graduates from neighbouring countries.</p> <ul style="list-style-type: none"> Adapting the training of PhD students to those fields of geology that are emerging most strongly can give students a competitive edge and make the degree more attractive to national and international students. | <p>generation of the researchers may cause the decrease of the scientific and supervisor potential of the DSG and the Faculty.</p> |
|---|--|

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> | <i>Fulfilled</i> | |
| 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</p> | <i>Fulfilled</i> | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|--|----------------------------|--|
| | | Code of Doctoral Studies with subsequent amendments and additions. | | |
| 3. | PI | A.1.2.1. The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background. | Fulfilled | |
| 4. | PI | A.1.2.2. The existence and use of an appropriate software program and evidence of its use to verify the percentage of similarity in all doctoral theses. | 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. | 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%. | Partially fulfilled | <i>To increase the part of doctoral students receiving additional financial support for their research. Also, to simplify the applying procedure for funding or give the PhD students more assistance in the funding applying procedures.</i> |
| 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, publication of specialty papers or other specific forms of dissemination etc.). | Partially fulfilled | <i>To increase the reimbursement of professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination etc.).</i> |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|---|------------------|-----------------|
| 8. | CPI | <p>A.2.1.1. The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly</p> | Fulfilled | |
| 9. | CPI | <p>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.</p> | Fulfilled | |
| 10. | PI * | <p>A.3.1.2. At least 50% of all doctoral advisors have a full-time employment contract for an indefinite period with the IOSUD.</p> | Fulfilled | |
| 11. | PI | <p>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.</p> | Fulfilled | |
| 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> | Fulfilled | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|--|------------------|-----------------|
| 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> | Fulfilled | |
| 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 for acquiring their enabling certificate, based on their scientific results within the past five years</p> | Fulfilled | |
| 15. | PI * | <p>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</p> | Fulfilled | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|---|------------------|-----------------|
| | | 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. | | |
| 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. | 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%. | Fulfilled | |
| 18. | PI | B.2.1.1. The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing. | Fulfilled | |
| 19. | PI | B.2.1.2. At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program. | | |
| 20. | PI | B.2.1.3. The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes”, specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities. | Fulfilled | |
| 21. | PI | B.2.1.4. All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting. | Fulfilled | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|---|------------------|-----------------|
| 22. | CPI | B.2.1.5. For a doctoral study domain, the ratio between the number of doctoral students and the number of teaching staff/researchers providing doctoral guidance must not exceed 3:1. | Fulfilled | |
| 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 | 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. | 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 evaluated IOSUD should not exceed two (2) in a year for the theses coordinated by the same doctoral thesis advisor. | Fulfilled | |
| 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. | Fulfilled | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|---|-------------------------|-----------------|
| 27. | PI | <p>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:</p> <ul style="list-style-type: none"> 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. | <i>Fulfilled</i> | |
| 28. | PI * | <p>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.</p> | <i>Fulfilled</i> | |
| 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; | <i>Fulfilled</i> | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|--|----------------------------|-----------------|
| | | <p>g) the list of doctoral students within the domain with necessary information (year of registration; advisor);</p> <p>h) information on the standards for developing the doctoral thesis;</p> <p>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> | | |
| 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> | Fulfilled | |
| 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> | Fulfilled | |
| 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> | Fulfilled | |
| 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, 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> | Partially fulfilled | |
| 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</p> | Fulfilled | |

| No. | Type of indicator (PI, PI *, CPI) | Performance indicator | Judgment | Recommendations |
|-----|-----------------------------------|---|------------------|-----------------|
| | | leading experts to deliver courses/lectures for doctoral students. | | |
| 35. | PI | C.3.1.3. The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees etc.). | Fulfilled | |

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

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

VI. Conclusions and general recommendations

Several important issues raised during the evaluation are resumed and some general conclusions are drawn on the quality of the education provided within the doctoral study domain under review; the Experts' Panel also presents general assessments about the institution. Other general recommendation may also be presented, which cannot be related to a specific indicator and have not been presented at point V.

A decision is proposed, together with the reasons for granting it (if the Experts' Panel members do not reach a consensus, each of them can propose and argue his/her own decision).

The EEC evaluated the Doctoral School of Geology at the University of Bucharest based on the provided self-assessment report and the remote site visit. The International Expert (IE) came to the conclusion that the Doctoral School of Geology evaluated has high standards and meets quality expectations. Furthermore, the DSG disposes of a first-rate scientific working environment favourable for the training of highly scientifically qualified PhDs in Geology.

The DSG provides to its PhD students the highest-quality education in the field of Geology. They have an excellent teaching staff with the prominent scientific achievements.

The IE recognized the overall work of the University of Bucharest and in particular the Doctoral School of Geology as excellent. It covers most of the fields, including applied, of research in geology, and it makes great efforts to offer high-quality education to PhD students. The SDGs have a number of specific positive characteristics. This provides excellent support for students with access to a basic science database and plagiarism control software.



Among the positive characteristics of the institution are the close contacts and excellent mutual understanding between doctoral students and their supervisors, other teaching staff. This is reflected in the joint publications of supervisors and students, some of them in highly cited journals. At the same time, teachers help students develop their international experience, participate in foreign conferences and international research projects. Exchange programs with European and other universities worldwide should help in this activity.

The number of research laboratories, most of which are equipped with modern devices, makes a positive impression. A number of videos reviewed by the IE show that most of these laboratories were in active research at the time of the video recording. There are impressive and large scientific geological collections, which are part of the scientific fund of the University and also belong to the World heritage.

At the same time, IE would like to bring attention to some internal weaknesses. The IE recommends increasing the part of doctoral students receiving additional support for their research. Some PhD students gave the reason why they did not apply for this support because of the complicated application procedure. So, the University administration should simplify the applying procedure or give the PhD students more assistance in the applying procedures. The insufficient percent of funding for doctoral programs is spent on professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers etc.) could be explained by the COVID-19 epidemic restrictions during the last two years, but, from the other hand, it was still low in the previous years. So, the students' activity that needs this funding should be steeply increased in the next years. The quantity of the doctoral thesis advisors that meet the the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) are at the minimum and should be increased. The relatively low number (50%) of doctoral supervisors younger than 65 years old, with permanent working contracts, and the natural decline of the older generation of the researchers may cause the decrease of the scientific and supervisor potential of the DSG and the Faculty. Only few of the research laboratories received new equipment during the last five years.

The IE was deeply impressed by the work done and the scientific achievements of the Doctoral School of Geology and he sees great prospects for its further development and new achievements.

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.*

Bogdan Ridush