

The External Evaluation Report of a Doctoral Study Domain

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I. Introduction

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.).*

The evaluation of the doctoral study domains of the Petroleum-Gas University of Ploiești was during 20.09.2021 – 24.09.2021. Due to the pandemic the main activities were organised online over developed schedule of meetings with key representatives from the domain. (Annex 1)

The team for the Mechanical engineering doctoral school was:

- Coordinator – prof. VOICU Gheorghe - Universitatea "Politehnica" București
- International expert – prof. Djidrov Mishko, Goce Delcev University - Stip, N. Macedonia
- Student - ONCESCU Teofil-Alin - Universitatea din Craiova

The site visit was organised on 23.09.2021 where prof. VOICU Gheorghe and student ONCESCU Teofil-Alin visited the university and meet the professors from the doctoral school.

The Petroleum-Gas University of Ploiesti is a higher education institution established in 1948, under the name of Petroleum-Gas Institute Bucuresti. In 1973 the Institute of Oil, Gas and Geology in Bucharest merges with the Petroleum Institute in Ploiesti, under the name of Petroleum-Gas Institute with headquartered in Ploiesti Municipality. The current name is Petroleum-Gas University of Ploiesti. Since the establishment in 1948, the University had the right to perform academic doctoral studies.

They organise scientific doctor's degree studies based on advanced scientific creation and research, that allows the PhD students to obtain both top skills in a specialized study domain, as well as personal



and general management skills. After they graduate students can elaborate scientific research projects, critically analyse, assessing and synthesising new and complex ideas and based on it, discover innovative solutions, constantly monitor quality and performance of own activity and the activity of the team, efficiently communicate with the professional community and the civil society given in his scientific research domain and contribute to the development of the society.

Currently they offer 26 programmes in bachelor's degree, 13 in master's degree and 4 for PhD degree in the following domains - Mining, Oil and Gas, Mechanical Engineering, Systems Engineering, Chemical Engineering (internet sources).

Being a medium scale university, Petroleum and Gas University of Ploiești teaches more than 14 thousand students. The university accepts applications from foreign students. The academic makeup of UPG includes around 799 teachers. (Internet sources).

During the long history of the university and from the 836 PhD degrees awarded 270 were from the Mechanical and Electrical Engineering.

As stated in the self-evaluation report the university is running a multidisciplinary doctoral school with 27 PhD supervisors in the already accredited/authorized domains, 2 supervisors in liquidation domains and 2 supervisors of Sciences of Education.

For this evaluation, the data for Mechanical Engineering PhD domain is key and in this domain there are 7 PhD supervisors and 21 doctoral students;

In 2019 after the institutional assessment by the Romanian Agency for Quality Assurance in Higher Education, The Petroleum-Gas University of Ploiesti received the official recognition at the level of quality they provide with HIGH CONFIDENCE DEGREE.

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.

For the process of evaluating the doctoral study domain the starting point of the evaluation was analysis of the Self-assessment report. The structure and the elements well enough define the doctoral domain. On 54 pages the domain is explained over general information section including information about the intuitional capacity and mission and objectives of the domain. The process of teaching, learning and evaluation is explained and information on human, material, and financial resources is presented. The internal quality assurance system is presented, and all key information are presented necessary for the specific standards, indicators, and criteria to be met.

Since the international evaluators were only working online and no visit was conducted, the documents that were analysed were presented in an electronic form on the cloud service site and send by email. All presented documents were more than sufficient for the purpose of the evaluation.

The meeting/discussions were organised online on Zoom platform in a timely manner basing on the greed time frame of work. The meeting/discussions all were opened with few information from who are we meeting and then most of the participants represented their position or relation to the doctoral domain. After that open discussion was encouraged with questions asked by the evaluators. Easily the discussion was developed in an open conversation that leded to clarification of many key points.

For the meeting with PhD student's questionnaire was prepared but the results were not shared.

There were not organised online meetings with Career Counselling and Guidance Center, student organisation, secretariats and other administrative offices like Social/Student Residences-Cafeterias etc. Student Residences-Cafeterias were seen as part of the visit.

All analysis of the presented data and documents are part of the performance indicators section.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

The Petroleum-Gas University of Ploiesti in the 73 years of existence has become one of the most important institution of higher education in Romania. It undertakes the mission of generating and transferring knowledge to society through by initial and ongoing training at university and post university level, in view of personal development, of personal insertion of the individual and the satisfaction of the need for competence in the economic-social environment by scientific research, development, innovation and technological transfer, by collective and individual creation of engineering sciences domain economic sciences, arts, social-human sciences, medical sciences, legal sciences, by ensuring the physical and athletic performance and development, as well as the capitalization and dissemination of the results thereof (self-evaluation report).

The University offers all members of the community the necessary conditions for the capitalization of the personal abilities by education, scientific research, and social-cultural activities (self-evaluation report).

It is mentioned that there is strategic plan (page 9) and that it sets to the management teams the strategic objectives of the university during the period 2020-2024, and that it is in full compliance with the university's assumed mission, but no plan was shown in the documents.

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

The Petroleum-Gas University of Ploiești organizes doctoral university studies within the Institution Organizing Doctoral University Studies (IOSUD-UPG Ploiești). Ever since its establishment (1948) the University had the right to perform doctoral university studies.

There is in place a regulation of Organization and functioning of Petroleum and Gas University of Ploiesti.

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

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

a) *the internal regulations of the Doctoral School;*

In the self-evaluation report it is written that at IOSUD Petroleum and Gas University of Ploiești level, regulations specific to the doctoral studies exist and that they are applied. Here are documents and facts supporting that:

- There is a clear hierarchy structure presented in organogram with a link to the site.
- There is a Regulation of organization and performance of the doctoral university studies at PGU Ploiesti with Decision of the University Senate and link to the site.
- There is Regulation for the organization and deployment of the doctoral university studies of Petroleum-Gas University of Ploiesti – for PhD candidates registered before the university year 2019-2020, and after 2019-2020, and a version with OM changes.
- There is also a Regulation of the doctoral school of the Petroleum-Gas University of Ploiești for the multidisciplinary doctoral school within IOSUD-PGU
- They have regulation of ethics and academic integrity that has clear practices and enforcement mechanisms and provides ways to monitor compliance.

All of this proves that there are internal regulations at the doctoral school. Also, this was proven over the meetings with the doctoral school members and PhD students.

Information is missing on the English version of the internet site.

The graduated students at the students that are part of university now, also stated that they have clear regulations that they are aware of since the beginning, but during the process they forget on some of them. This indicates that they need regular coordination with students for the administrative and regulation activities.

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;*

In the self-evaluation report it is written that there is Organization Methodology of the elections and of appointment of the members of the Council for the University Doctoral Studies within the Petroleum-Gas University of Ploiesti. This document was introduced over control from the monitoring Commission and approved within the university Senate.

There is also Methodology of organization and deployment of the settlement and election process of the management structures and positions at the level of Petroleum-Gas University of Ploiesti.

This was proven over the meetings with the professors from the domain.

As for the students and their representatives, I can say that over the meetings I did not get the feeling that they know how their representatives were elected or what the process for election was.

c) *the Methodologies for organizing and conducting doctoral studies (for the admission of doctoral students, for the completion of doctoral studies);*



In the self-evaluation report it is stated that there is a Methodology of organization and performance acceptance contest to doctoral studies 2020, which is available online.

Also, there is a Regulation of the doctoral university studies at the Petroleum–Gas University of Ploiesti that defines the obligations of the PhD student and the supervisor. They even have regulation - Pre-presentation and presentation of the PhD thesis along the emergency state as an answer for the pandemic problems.

All the information can be found on Romanian UPG site and the site of the doctoral school site. Not so much information can be found on the English site.

Over the meetings it was clarified that there is a clear selection criterion for admission of candidates which include: the academic, research and professional performance of candidates, their interest in scientific research, publications in the field and a proposal research topic.

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

They have Procedure on automatic acknowledgment by the Petroleum-Gas University of Ploiesti of the quality of PhD supervisor obtained in the academic education institutions internationally certified. This is for the recognizing the status of a Doctoral advisor and it is in use since 2017.

As for the equivalence of the doctoral degree obtained abroad, they have Regulation on public presentation of PhD habitation and hiring of the PhD supervisors at the Petroleum – Gas University of Ploiesti.

All of this is uploaded to the internet site and proper link was presented in the self-evaluation report.

e) functional management structures (Council of the doctoral school), giving proof of the regularity as well of meetings;

From the meetings and from the information in the self-evaluation report there are functional management structures of the Schools for Doctoral Studies. They are established based on the regulations mentioned in point a) from this criterion. There is also an Anexa A111_Sedinte CSD si CSUD where meetings are listed. Also, there were organized meetings during the pandemic period.

f) the contract for doctoral studies;

As presented in the self-evaluation report, all doctoral student sign Contract for doctoral studies (Anexa A111_Contract de studii universitare de doctorat). It defines the activities during the doctoral studies of the doctoral student, the activities of the Individual Program of doctoral studies, regulating the relations between the University, the doctoral student and the doctoral supervisor, specifying the rights and obligations of the signatory parties, in accordance with the legislation in force.

It includes annexes:

- The individual plan of the advanced academic training
- The individual plan of the scientific research program

Each PhD student contacts with a guidance committee made up of 4 members – the supervisor and 3 more teachers, appointed annually by decision of the PGU Rector.

The same members are part of the commission for the presentation of the Research Project, Research Reports and Pre-presentation of the doctoral thesis. They follow the evolution of the PhD student.

All of this is presented in self-evaluation report and in the annexes in the cloud service.

There were not comments from the students regarding this document.



- g) *internal procedures for the analysis and approval of proposals regarding the training for doctoral study programs based on advanced academic studies.*

As defined in Regulation on the organization and performance of doctoral academic studies at the Petroleum and Gas University of Ploiesti, the doctoral studies are carried out by:

- the advanced academic training program and
- the scientific research individual program.

The exams in the advanced academic training program are proposed by the PhD supervisor and approved by the director of the Doctoral School. The director also approves each exam or report presentation in front of the commission (supervisor plus 2 members) that is also approved by the director.

The individual plan and the commission for presentation of the scientific research reports are also approved by the director of the Doctoral School. This commission is composed by the supervisor and the members of the guidance commission and the presentation is made in public meetings

The proposals for PhD themes are being formulated by the PhD supervisors after discussions held with the representatives of the industrial environment.

All our meetings with the students, graduated PhD students and professors and Doctoral school members, helped us to see the internal procedures for the analysis and approval of proposals.

Recommendations: /

The indicator is fulfilled

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

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

The key documents are presented in the documents on the cloud service in **Anexa A.1.1.2** folder. All information presented in the self-evaluation report and information gathered from the meetings support the regulation defined documents.

Article 17, paragraph (5)	Evaluation Findings*
a) acceptance of new thesis supervisors and the manner whereby a thesis supervisor may be excluded from the doctoral school;	<p>There is a Regulation on the public defines of habitation theses and the hiring of doctoral supervisors of Petroleum-Gas University of Ploiești where there are articles specifying the conditions regarding the organization and carrying out the affiliation process and granting the quality member of Doctoral School within IOSUD-PGU.</p> <p>Also, the PhD Supervisors are subject to internal and external analysis in the period of no more than 5 years. In The organization and development regulation of doctoral studies of Petroleum-Gas University of</p>

	Ploiesti. Disaffiliation from the Doctoral School of IOSUD-UPG can be done: (1) At the request of the doctoral supervisor. (2) Following a notification received from the Ethics Commission of PGU-Ploiești regarding the violation of the ethics norms by an affiliated doctoral supervisor.
b) mechanisms for deciding on the adequacy, make-up and contents of the advanced university studies programme;	It is written that there is an internal mechanism through which the study programs are initiated, approved, monitored, and evaluated, including the doctoral ones. Not clear document is provided.
c) procedures for replacing a doctoral student's thesis supervisor and conflict mediation procedures;	CSD and CSUD propose mandatory criteria, procedures and standards aimed to change the doctoral supervisor of a certain doctoral student and conflict mediation procedures (Organization and development of doctoral studies regulation of Petroleum-Gas University of Ploiesti - art. 21 paragraph 1, 2 and 3). On a request of the doctoral student, CSD may approve the change of the doctoral supervisor if it has been found the non-fulfilment of the legal or contractual obligations assumed by him, or for other reasons related to the guidance relationship between the doctoral supervisor and the doctoral student. Then the doctoral school council appoints another doctoral supervisor. (self-evaluation report page 16)
d) conditions for interrupting a doctoral programme;	CSD and CSUD propose mandatory criteria, procedures, and standards regarding the conditions under which the doctoral program can be interrupted. Different articles defined different reasons for interruption. Self-evaluation report page 17.
e) means for preventing research fraud, including plagiarism;	This is well defined in Code of University Deontology and Ethics.
f) providing access to research resources;	They have projects and grants that gives access to research resources. Over the meetings we gathered different information regarding this measure.
g) doctoral students' attendance requirements, based on a methodology developed by the Ministry of Education, Research, Youth and Sports.	It is defined in The Regulation on the organization and conduct of Petroleum-Gas University of Ploiești in the mandatory criteria, procedures and standards regarding different aspects. Defined on page 36 in self-evaluation report.

*All annexes are in Romanian language. Basic google translation was used to analyse all the criteria. Meetings helped a lot in the evaluation.

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 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

There is an IT system intended to record the activity of doctoral students and their academic background at The Petroleum - Gas University of Ploiesti.

It is presented in the self-evaluation report on pages 17-18.

Recommendations: *Probably the system can produce a list of PhD students and topic of research and all that information can be available to the employers. This will help to have insight in the research and establish a connection during the studies.*

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

At the university there is a software system for plagiarism detection named SISTEMANTIPLAGIAT.RO. This is an online tool dedicated to checking all documents with sources in the University's own database (archived documents), in the databases of other Universities (based on the declaration of mutual exchange of databases), internet resources.

They have defined minimum standards expressed in percentage for sources and text and it is a maximum of 50%. Similarity coefficient 2 - expresses as a percentage the level of loans containing at least 25 words. The limit accepted in our institution is a maximum of 5%.

During the meetings we were informed that they had very little examples of similarities in doctoral thesis.

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.*

As defined in the documents and explained in the self-evaluation report, the doctoral school has an upward trend in gaining financial resources. The financial resources are allocated for the proper accomplishment of the mission and objectives defined. There is a list of projects that brought financial support to the domain and were used for some research.

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

Grants are essential element for boosting the research and they much related to the ability of doctoral supervisors to attract and find additional financial resources. As stated in the self-evaluation report for the evaluated period the doctoral supervisors attracted additional funds through research-development-innovation grants, institutional development or human resources, financed following an international / national competition. The information for the extra grands available for PhD students are presented in self-evaluation report page 20-21 and Annexes A133_Sprijin financiar and Anexa A132_ Statistică sprijin.

As a foreign evaluator it is not easy to determine where the fundings are coming from and especially in they are used optimally and if there are any revenues.

Recommendations: /

The indicator is fulfilled.

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

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

Analysis on three levels was done and here are the considerations:

- annexes available on the cloud system - are hard to be analysed since they are in Romanian language (that is understandable and fine), but they are also scanned and it is impossible to copy-paste text and translate in somewhere.
- meetings organised during the evaluation - they help a lot, but it is hard to define this criterion over meetings
- self-evaluation report – there is a table on page 21 that states the situation and the percentage is more than 10%.

IOSUD PGU PhD Domain	Total number of PhDs	Total number of PhDs Studies Program	Total number of PhDs grace period	Total number PhD interruption period	Percent
Mechanical Engineering	20	14	5	1	30%

I can assume that this criterion is satisfied. It is hard to check the facts.

Recommendations: *Other options for funding sources are needed for the students. Clear defining of the number of students that benefit is needed.*

The indicator is fulfilled.

Performance Indicator *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.).*

- *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*

This indicator was hard to define since there is information regarding the spending in the self-evaluation report and in the files uploaded to the cloud service, but hard evidence isn't available.

Over the interviews I found out that there were this kind of payments and they differ for each PhD student. This is understandable knowing the diversities of conferences, trainings and papers that have diverse fee amount.

On page 21 in self-evaluation report there is a table with information regarding this and the overall percentage mentioned is 6.24% that is lower than the 10% needed for this criterion.

Recommendations: *Clear information is needed for the spending of funds.*

The indicator is fulfilled

Criterion A.2. Research infrastructure

On the university the present infrastructure provides professors and students with the adequate material base for the development of doctoral university studies, with top endowments and special equipment, in accordance with the mission and objectives.

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

As explained in the self-evaluation report, the research infrastructure is complex and is presented in uploaded file where all laboratories can be seen.

- http://ime.upg-ploiesti.ro/wp-content/uploads/2019/11/RESEARCH-FACILITIES_LABORATOARE-DE-CERCETARE.pdf
- <http://ime.upg-ploiesti.ro/wp-content/uploads/2020/01/LED.pdf>
- http://ime.upg-ploiesti.ro/wp-content/uploads/2021/03/Laborator-activitati-didactice_cercetare-1.pdf

All necessary information was clarified over the meetings with the doctoral school and over the visit done by the evaluation team members.

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

From the self-evaluation report we can see that the doctoral students receive access to the research laboratories from the doctoral school. This is in support of what we find put over the meetings with doctoral students, graduates, doctoral supervisors and doctoral school professors. Their involvement in research centres and laboratories is crucial for the doctoral students.

In links presented in the self-evaluation report there are lists and photos of the research infrastructure. It is not clear if it was acquired and developed in the last 5 years.

Recommendations: *Inventory of equipment will help students to know what equipment can be used for their research at the university level. Students did not know what other equipment is available. Clear listing of the equipment in the last 5 years is needed.*

The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

One of the university's objectives is development of advanced, fundamental, and applicative research by increasing the human potential and material resources of the research units. This clarifies the importance of the quality of human resources at the university and in the whole domains.

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 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

As stated in the self-evaluation report, within the field of doctoral studies in Mechanical Engineering, there are 5 doctoral supervisors in 2019/20 and 2 more in 2020/21. There is a list with names presented on page 24.

For foreign evaluator checking CNATDCU criteria is bit hard. All the information is presented but it is in Romanian language.

Basing on the information available and situation that as foreign evaluator I am, I can say that this indicator is fulfilled with high percentage.

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 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

From the self-evaluation report we can see that the number of supervisors is 7, from which 4 are full-time and 3 are affiliated. This satisfies the need of minimum 50% to be employed.

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 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

As defined in the self-evaluation report and as explained over the meetings, the Doctoral School provides doctoral students training programs based on advanced university studies (PPA), and the analytical programs are being voted by the CSD and CSUD and the individual scientific research program (PCS).

The doctoral supervisors holding the courses from the advanced university training program have competences in the field of the taught subjects as predated in their CVs uploaded to the cloud system. Where it is easy to see that they have numerous articles published in prestigious journals and have participated in related research projects, etc.

All of this was proven over meetings organised with doctoral students, graduates, doctoral supervisors and doctoral school members.

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 programs¹ does not exceed 20%.

¹ 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.



- 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

As stated in the self-evaluation report there aren't PhD supervisors who have under coordination, during their doctoral studies, more than 8 PhD students.

There is no Annex on the cloud service to be checked if there is clear evidence for this.

Recommendations: Clarification is needed with documents to prove the situation.

The indicator is fulfilled

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

The doctoral school has clear objective where members of the university have to have knowledge of the realities and trends at the level of Romanian, European and Global higher education, by participation in programs of development, research, innovation, at national and international scientific manifestations.

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

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

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

The international visibility of PhD supervisors is shown in in Annex A321 on the cloud service and Table A321 in the self-evaluation report. Scientific papers published in international journals, indexed in Web of Science or other prestigious databases are listed and information is shown for their presence in the scientific committees of international conferences and editorial teams of some international magazines.

With all information provide in the self-evaluation report it is obvious that this criterion is meet.

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

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

The self-evaluation report shows that in the academic year 2020-2021, 7 doctoral supervisors are active, 5 doctoral supervisors from the beginning of the academic year, 2 after obtaining the qualification. For the self-evaluation purpose the professors were evaluated and 5 meet at least 25% of the score globally required by the minimum standards CNATDCU. This is clarified in annex 3.2.2.

The fulfilment is clear for this indicator because 5 (more than 50%) of the professors meet the criteria by CNATDCU.

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 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

We have analysed information from different sources:

- Annex B.1.1.1
- The Table in section B.1.1.1. from self-evaluation report page 33, and
- Meetings with PhD students and graduates.

The summed table is:

	2015	2016	2017	2018	2019	
No. enrolled master's graduates	0	0	1	1	1	Average report 5 years
No. State budget places	2	8	2	3	3	
%	0	0	0.5	0.33	0.33	0.232

This is more that the indicator asks.

Recommendations: Promotion nationally emphasising the quality of the doctoral school and the university might bring more students from other universities in Romania.

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

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

In the self-evaluation report it is presented that the admission of PhD studies is performed according to the Methodology of organization and performance acceptance contest to doctoral studies. This is permitted by the Commission and proved in university Senate. The methodology is being annually updated.

It is clear that the PhD students are selected on specific criteria: the academic, research and professional performance of candidates, their interest in scientific research, publications in the field and a proposal research topic.

Not clear where this is not present on the internet site or was hard to be find (accessed 08.10.21).

The version of the self-evaluation did not include this criterion. The university and the doctoral domain should use the last version of the self-evaluation given by ARACIS.

Recommendations: For the purpose of internalisation of the doctoral schools this kind of documents should be also available in English or clearly presented on the internet site.

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 admission² does not exceed 30%.

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

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

In the self-evaluation report there is information regarding the dropout / dropout rate of doctoral students on page 34.

THE ADDMISSION YEAR	Number of candidates admitted to the Doctorate	PhD students who dropped out of school in the first two years / dropout	Percentage, %
2015	4	0	0
2016	4	1	25
2017	3	0	0
2018	8	0	0
2019	3	0	0
2020	4	0	0

As seen from the table there is a dropout rate that is in line with this indicator, that is to be less than 30%.

During the meetings we did not hear what the reasons for student's dropout from their studies was. There aren't many cases but having some exit questionnaire will give additional information that can initiate some activities to reduce the dropout rate in the future.

Recommendations: /

The indicator is fulfilled.

² 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.



Criterion B.2. The content of doctoral programs

At IOSUD PGU there is an internal mechanism through which study programs are initiated, approved, monitored and evaluated. This is a continuous process of redesigning the content of the curricula within the limits allowed by ARACIS.

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 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

As stated in the self-evaluation report the training program based on advanced university studies, the doctoral student must pass the exam from 3 disciplines, one from each category of the curriculum (compulsory disciplines-Ethics and academic integrity, advanced knowledge disciplines-profile disciplines accordingly with the topic of the doctoral student and complementary disciplines-related to the research methodology or related to it.

Each discipline followed by the doctoral student is credited with credits and the doctoral student must accumulate 30 credits.

Not clear what is the role of the doctoral supervisor in deciding over the optional disciplines and if the student can choose from the disciplines offered by another School for Doctoral Studies.

Recommendations: /

The indicator is fulfilled.

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

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

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

At the IOSUD and the Doctoral School for each doctoral domain have in the curricula the obligation to pass the compulsory exam of Ethics and academic integrity. The training offer for transversal skills, including aspects related to research ethics, scientometry and academic writing is correlated with strategies and procedures for quality assurance focused on preventing academic fraud and resolving violations of university ethics.

This is related to the strategies and procedures for quality assurance focused on preventing academic fraud and resolving situations of violation of university ethics and it is part of the Organization and conduct of doctoral studies Regulation of Petroleum-Gas University of Ploiești.

From the meetings with the doctoral students and the doctoral supervisors we have found out that this indicator is 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 activities³.*

- 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

As mentioned before in another indicator, there is a mechanism through which study programs are initiated, approved, monitored and evaluated.

There are procedures in place dedicated to this.

It is not that clear if the outcomes are defined for each programme.

There are mandatory criteria and it is written that the structure and content of the training program based on advanced university studies (PPA) is defined.

There are audits and evaluations of doctoral supervisors, that is not clear how help to the content and learning outcomes.

Recommendations: Clear definition of the the learning outcomes for each discipline is needed. There are procedures for this, but how they are connected to the outcomes is hard to specify.

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

As shown in the self-evaluation report there is a procedure for this where it is clear that the scientific research activity of the student is carried out under the guidance of the doctoral supervisor, supported by the advisory committee. This committee consists of 3 other members, who can be part of the research team of the doctoral supervisor, of other persons affiliated to the doctoral school, or of teachers and researchers not affiliated to it. The composition of the advisory commission is established by the doctoral supervisor, following the consultation with the doctoral student. The advisory committee is established within 30 calendar days from the enrolment of the doctoral student.

³ 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 PhD students and graduates confirmed the availability of the committee and regularity of meetings and talks with them.

Recommendations: /

The indicator is fulfilled

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

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

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

In the self-evaluation report there is information regarding the number of doctoral students and the number of teachers / researchers who provide guidance. The ratio is as presented:

- 2015-2016 – 9:9
- 2016-2017 – 13:10
- 2017-2018 – 11:7
- 2018-2019 – 11:8
- 2019-2020 – 19:10

From this it is obvious that the ratios are in the limit of the indicator, less than 3:1. All information is given in the folder on the cloud in in Anexa B215.

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

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

In Annex B.3.1.1 the work of PhD students is presented. Some of the papers are journal articles, some of them are from conferences. There is a list of published materials by the PhD students and the name of their supervisor.

I have analysed most of the papers on the cloud services I can say that the articles present significant original contributions in the field of Mechanical Engineering.

Recommendations: /
The indicator is fulfilled

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

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

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

I have analysed the data presented in Annex B.3.1.2 with information regarding the participation of doctoral students in events. There is information regarding the participations in events in the country and abroad.

Overall, seeing the massive number of examples without any further mathematical check-up, I can say that ratio for the last 5 years is higher than 1.

Recommendations: /
The indicator is fulfilled.

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

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

With analysis of Annex B.3.2.1 it can be easily seen that each specialist coming from a higher education institution, other than the evaluated IOSUD is not included more than 2 times in each year for the theses coordinated by the same doctoral thesis supervisor.

Recommendations: /
The indicator is fulfilled.

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



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

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

This indicator was analysed basing on the information from Annex B.3.2.2. For the period 2016-2020 of Mechanical Engineering PhD domain, 7 doctoral theses were defended and the maximum number of participations of a specialist from another IOSUD divided by the number of theses completed in the last 5 years in the field of Mechanical Engineering satisfies the indicator requirement.

Recommendations: /

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

At Petroleum-Gas University of Ploiesti they have clear quality assurance objectives dedicated to didactic, research and administrative activities at the university. The university has received the official recognition at the level of quality they provide for by obtaining the rating HIGH CONFIDENCE DEGREE awarded by the Romanian Agency for Quality Assurance in Higher Education following the institutional assessment (2019).

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

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

- (a) the scientific work of Doctoral advisors;*

The PhD Supervisors are subject to internal and external analysis of an interval of no more than 5 years. In The organization and development regulation of doctoral studies of Petroleum-Gas University of Ploiesti, in article. 50 (1), (2), (3) and (4) there are requirements regarding the evaluation of doctoral supervisors. Their work is followed throughout the years.

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

It is written in the self-evaluation report that the doctoral students have unrestricted access to all infrastructure available of the university, regardless of its administrator. They have decisions for this and over the meetings with students and graduates, this was proven. Though there is always option for improvements in infrastructure.

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

All regulations are available on the Romanian version of the site. In the self-evaluation report more than enough times the procedures were presented.

- d) the scientific activity of doctoral students;*

There is a list of activities that the PhD student have conducted over the last 5 years. This proves the activity. The procedures for scientific activity are presented in the report in different sections.

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

After admission each doctoral student develops with his supervisor an Individual plan of the advanced university training program. This is later approved by the Rector / Director of CSD, is submitted to the CSD secretariat. The activity of each PhD student is thus monitored through exams, research project and research reports.

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

Proofs for academic services and counselling are presented in the self-evaluation report and it was proved over the meetings with the students and graduates.

Recommendations: /

The indicator is fulfilled.

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

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

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

As defined in the self-evaluation report there are procedures that regulate the systematic collection of feedback from all parties involved: PhD supervisors, PhD students and other academic staff involved in the activity of the School for Doctoral Studies.

All of this was commented over the meetings with PhD students and Doctoral school professors.

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 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

From the self-evaluation report and from the internet site we can see that institutional regulation for the organization and development of doctoral university studies can be reached on their site.

All data that was available was in Romanian language. The information on the internet site is in Romanian as well.

Recommendations: For better internationalisation of the doctoral school key documents should be in English and available on the English internet site.

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 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

As described detailly in self-evaluation report PhD students have access to 288,000 volumes of books in a library. Also, they have online accessibility to several databases, subscriptions to specialized magazines, etc.

There is possibility to access ANELIS databases that connect to: Science Direct, Scopus, SpringerLink Journal, Thomson Reuters - Derwent Innovations Index, Thomson Reuters - Web of Science, Thomson Reuters - Journal Citation Reports, OnePetro, Wiley Online Library and 2000 titles electronic books from all domains that can be accessed full-text, in the ANELIS PLUS National Deposit.

Over the meeting with the PhD students, we were assured that they have access to 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 of the facts, the findings from the assessed institution's documents and the evaluation visit itself

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

The PhD students during the development of their doctoral thesis have right to check 2 times their material with the software. This has to be done with consent of the doctoral supervisor. In Petroleum and Gas University of Ploiești there is a system software for plagiarism detection - SISTEMANTIPLAGIAT.RO. This is an online tool dedicated to checking all documents with sources of University's own database (archived documents), in the databases of other Universities (based on the declaration of mutual exchange of databases) and other resources available on the Internet.

They have clearly defined minimum plagiarism numbers.

Recommendations: /

The indicator is fulfilled

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

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

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

There is a Regulation on the organization and conduct of doctoral studies Petroleum-Gas University of Ploiești, where PhD students have unrestricted access to all infrastructure available at the university, regardless of its administrator.

From the meetings with the students, we have been informed that they have access to research laboratories or other facilities.

PhD students can also have access of to the special resources of the Laboratories within the research centres and see all documents with all the purchased equipment.

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 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

IOSUD and the ERASMUS office within the institution support mobility of students with concluded mobility agreements with foreign universities, research institutes, companies carrying out activities in the field of study.

CEEPUS program is also mentioned in the self-evaluation report.

International conferences as well.

No clear annex is presented for the mobility of students in the cloud service.

Overall, as said in the self-evaluation report the indicator is fulfilled and with around 35% of mobilities.

Recommendations: Clear strategy for internationalization, and more specifically student mobility is needed. Clear proof for internationalisation is needed.

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 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*

This criterion is not well defined in the self-evaluation report.

For the in international co-tutelage – no clear evidence is given. Students being part of internship is presented. This does not clarify this criterion.

For the or invitation of leading experts to deliver courses/lectures for doctoral students - Erasmus projects are mentioned with list and number of students participating in them and supposedly they listen to some leading experts' lectures. This is not clearly defined.

There is a list of links to some events that happened at the university that shows in non-structured way what has happened in the last 5 years.

Recommendations: Clear procedure to international co-tutelage is needed. Clear data must be presented for the invitation of leading 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*

As defined in the self-evaluation report there are activities to attract international students. Few are mentioned with links to the events.

Recommendations: Clear strategy for internationalization with plan of activities would help.

The indicator is fulfilled.

IV. SWOT Analysis

<p style="text-align: center;"><u>Strengths:</u></p> <ul style="list-style-type: none"> - Build reputation over the years for the doctoral schools - Cooperation with industry - Access to key internet research bases - Financial support for students from grants - Laboratories and centres ready for research - Interdisciplinary thesis developed - Cooperation between universities - Contacts with economic sector of the country 	<p style="text-align: center;"><u>Weaknesses:</u></p> <ul style="list-style-type: none"> - No foreign students - No new employments at the doctoral school - More grants options for PhD students are needed - Bureaucracy affecting professors' work - Not many students - Entrepreneurship training as part of the studies to help start new businesses
<p style="text-align: center;"><u>Opportunities:</u></p> <ul style="list-style-type: none"> - Applicability of PhD students' research - Cooperation in and out of the country (companies and institutes) - To improve QA procedures - improvement of materials availability in laboratories - Patents from PhD students' research - Following the fast-changing environment 	<p style="text-align: center;"><u>Threats:</u></p> <ul style="list-style-type: none"> - Motivation of supervisors for mentoring - No grants for some students - Aging of equipment - Investment intense laboratory and centres maintenance - Workload pressure on full-time working students - 3 years looks like it is not enough for engineering doctoral studies. - Minimum internationalisation - Closeness to Bucharest for decision where to study - Modernisation of study programmes in line with world changes - Future needed skills should be developed - Publication in top journals is time, money and energy consuming

V. Overview of judgments awarded and of the Recommendations

No.	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations
1	C	A.1.2.1	Fulfilled	Probably the system can produce a list of PhD students and topic of research and all that information can be available to the employers. This will help to have insight in the research and establish a connection during the studies.
2	*	A.1.3.2.	Fulfilled	Other options for funding sources are needed for the students. Clear defining of the number of students that benefit is needed.
3	*	A.1.3.3.	Fulfilled	Clear information is needed for the spending of funds.
4	C	A.2.1.1.	Fulfilled	Inventory of equipment will help students to know what equipment can be used for their research at the university level. Students did not know what other equipment is available. Clear listing of the equipment in the last 5 years is needed.
5	*	A.3.1.4.	Fulfilled	Clarification is needed with documents to prove the situation.
6	*	B.1.1.1.	Fulfilled	Promotion nationally emphasising the quality of the doctoral school and the university might bring more students from other universities in Romania.
7	*	B.1.2.1.	Fulfilled	For the purpose of internalisation of the doctoral schools this kind of documents should be also available in English or clearly presented on the internet site.
8	C	B.2.1.3.	Fulfilled	Clear definition of the the learning outcomes for each discipline is needed. There are procedures for this, but how they are connected to the outcomes is hard to specify.
9	C	C.2.1.1.	Fulfilled	For better internationalisation of the doctoral school key documents should be in English and available on the English internet site.
10	*	C.3.1.1.	Fulfilled	Clear strategy for internationalization, and more specifically student mobility is needed. Clear proof for internationalisation is needed.
11	C	C.3.1.2.	Fulfilled	Clear procedure to international co-tutelage is needed. Clear data must be presented for the invitation of leading experts.
12	C	C.3.1.3.	Fulfilled	Clear strategy for internationalization with plan of activities would help

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

From the analysis of the domain of Doctoral Studies in Mechanical Engineering at the Petroleum–Gas University of Ploiesti we can say that the doctoral school and the university are providing high quality education and research for the PhD students.

As checked over the self-evaluation report and documents available at the cloud service, all work is supported by proper regulation that is developed in line with the country regulation, ARACIS guidelines and need of modern education. Students are aware of all the procedures and beside the knowledge that they get, they price the support that they get at the doctoral school as well.

There is a need for clear strategy document where clear activities will be defined over some period. There might be document like this, but it was not mentioned or presented in the self-evaluation report.

The research is done in well-equipped laboratories and centres and they have well established connection with research institutes and companies in the country. There are investments in new equipment in the last years that increases the value of the education that the students get, but clarification was missing for the years of enquiring it.

Not many students use the options for mobilities and they carry out research in Romanian. The level of involvement of foreign professors in the thesis defending and in lectures organised must be increased.

There are proper Quality assurance measures that follow the work done, question the processes and propose improvements continuously. The self-evaluation report covers the key criteria with a lot of information, sometimes too much and for the next evaluation new version of ARACIS report must be used with clear and precise responses to all criteria.

There are IT system available for the students for their administrative work and for access to base with high quality journals. Research support is present for producing high quality papers that are published in high quality journals.

Plagiarism is well addressed and there are mechanisms for following the research, work on thesis and papers writing.

The modern world requires transversal skills development and interdisciplinary research done that in support of the possible entrepreneurship training available for students would help to produce more start-up companies. Curriculum needs to include transversal skills development with clear outcomes. This for now is not well addressed at the domain.

Cooperation with industry is on high level and there is a mutual understanding between the researchers and professors from one side and companies and institutes on the other side. There is possibility for improvements in the study programme and future skills development for the students so that they give better answer to the needs of the modern industry.

Recommendation can be given also to develop a proper internationalisation strategy that will help open the doctoral school for international students. There are promotional activities and there is interest for foreign students, but it can be improved. This will require translation of more key documents in English for the foreign students.

Grant opportunities must be increased so that all students have opportunities for well supported research. This for now is not a problem but it is a burden for professors and students.

The excellence students can be employed at the university and with that the future development will be assured without any disturbances and gaps in generations. This is done now on some level, but it can be improved.



In the end the Domain of Doctoral Studies in Mechanical Engineering, from the at the Petroleum–Gas University of Ploiești provides a high-quality doctoral education and research for the students. The teaching is done over well-designed procedures. The research is done with great support in well-equipped laboratories and centres and in line with all ethical principles. The results are presented in high quality journals that well represents this doctoral domain but also the education and research level of country.

International Evaluator



VII. Annexes

* All other annexes that are in Romanian language are part of the final version

Annex 1. Schedule for online meetings

Nr.4902 /06.09.2021

Programul⁴ vizitei de evaluare IOSUD / domeniilor de studii universitare de doctorat a **Universității Petrol-Gaze din Ploiești**
*The timetable of the evaluation IOSUD / doctoral study domains at the **Petroleum -Gas University of Ploiești***
Perioada de derulare a vizitei: 20.09.2021 – 24.09.2021
The evaluation period: 20.09.2021 – 24.09.2021

Evaluarea Externă Periodică a IOSUD și a domeniilor de studii universitare de doctorat
Periodical External Evaluation of the Institution Organising Doctoral Study Programs (IOSUD), and of the doctoral study domains

Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
Luni / Monday, 20.09.2021			
09:00-09:50	Întâlnire tehnică online pentru pregătirea și armonizarea etapelor de evaluare, în modul mixt, la nivel de domenii de doctorat și IOSUD <i>Online preliminary meeting for the preparation and harmonization of evaluation steps, in hybrid mode, of doctoral study domains and IOSUD</i>	- toți membrii echipei de evaluare <i>all evaluation panel members</i>	Înregistrare audio-video/ platforma ARACIS ZOOM <i>Audio-video recording / ARACIS ZOOM platform</i> https://us02web.zoom.us/j/84008866799?pwd=WmZ6YXFjZVMzOHByU3hXbXN1NVdrZz09
10:00-10:50	Întâlnirea online a comisiei de experți evaluatori cu reprezentanții conducerii universității și ai CSUD <i>Online meeting with representatives of the institution and of the Council for Academic Doctoral Studies (CSUD)</i>	- toți membrii echipei de evaluare <i>all evaluation panel members</i> - reprezentanți ai conducerii <i>representatives of the University's management</i> - reprezentanți ai CSUD și ai școlii doctorale <i>representatives of the CSUD and of the Doctoral School</i> - persoana de contact IOSUD/domenii <i>the contact person for IOSUD / doctoral domains</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/84915085155?pwd=QVQzQXAwM2tQVUhrYWkzeGlZN0lwZz09
11:00-11:50	Întâlnire online cu membrii Comisiei de Etică a universității <i>Online meeting with the members of the Ethics Commission</i>	- toți membrii echipei de evaluare <i>all evaluation panel members</i> -membrii Comisiei de Etică <i>Ethics Commission members</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/88269635684?pwd=WmJvNEpUK0pXQTRaZEdpUHE1VUItZz09
12:00-12:50	Activități de evaluare <i>Evaluation activities</i> Întâlnire online cu membrii Comisiei pentru Evaluarea și Asigurarea Calității (CEAC) / Departamentul de asigurare a calității	- toți membrii echipei de evaluare <i>all evaluation panel members</i> - reprezentanți ai CEAC/Departament AC <i>representatives of Commission for Quality Evaluation and Assurance</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/82524919079?pwd=WkhHbFlydklXbHRTZWVDS3VDRDdYz09

⁴ În perioada vizitei, pot fi solicitate și alte întâlniri, pentru eventuale clarificări.

During the visit, other meetings may be requested for possible clarifications.



Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
	<i>Online meeting with the Commission for Quality Evaluation and Assurance (CEAC) members / Quality Assurance Department</i>	<i>(CEAC) / Quality Assurance Department</i>	
13:00-14:00	Activități de evaluare <i>Evaluation activities</i> Domeniu: Întâlnire online a comisiei de evaluare cu reprezentanți ai absolvenților domeniului <i>Domain: Online meeting with graduates for the respective doctoral study domain</i>	Comisia de evaluare domeniu <i>Domain evaluation panel</i> - membrii comisiei de experți evaluatori domeniu <i>members of domain evaluation panel</i> - reprezentanți ai absolvenților <i>representatives of doctoral graduates</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> Domeniu/Domain Ingineria sistemelor/System engineering – în afara programului/outside schedule Ingineria chimică /Chemical engineering https://us02web.zoom.us/j/89626370819?pwd=K1ZkaXRoaVBMOXRPNHZTVnZ4UTR1dz09 Inginerie mecanică / Mechanical engineering https://us02web.zoom.us/j/86262916195?pwd=NHhhaE53dTl1SUN4QWI2NUVAr2JnUT09 Mine, petrol, gaze / Mine, oil, gas https://zoom.us/j/98602216830?pwd=Z1FRdlBuRFh0SmtsR3ZUZFUwL3A3dz09
14:00-15:00	Activități de evaluare <i>Evaluation activities</i> IOSUD: Întâlnire online a comisiei de evaluare cu reprezentanți ai absolvenților IOSUD <i>IOSUD: Online meeting with IOSUD graduates</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - membrii comisiei de experți evaluatori IOSUD <i>members of IOSUD evaluation panel</i> - reprezentanți ai absolvenților <i>representatives of doctoral graduates</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/82582344548?pwd=cUJ3WlpoT0tzbg8xUE9CQXlzUUVZz09
15:00-17:00	Continuarea activităților de evaluare a domeniilor de studii universitare de doctorat și IOSUD <i>Continuation of the doctoral study domain and IOSUD evaluation activities</i>	- la nivel de IOSUD <i>at IOSUD level</i> - la nivel de domenii de doctorat <i>at doctoral study domain level</i>	Se lucrează separat.⁵ (în acest interval de timp, coordonatorul IOSUD/DSUD are în vedere și comunicarea cu membrii comisiei privind desfășurarea evaluării IOSUD/DSUD) <i>Independent evaluation activities. (during this time frame, the IOSUD/DSUD Coordinator also envisages the communication with the panel members regarding the conduct of the IOSUD/DSUD evaluation).</i>

⁵ În cazul în care se organizează întâlniri suplimentare cu reprezentanții instituției de învățământ superior sau cu alte părți interesate, acestea se vor organiza în format online, după caz, de către instituția evaluată sau de către echipa de evaluare, iar înregistrările se vor încărca în *cloud-ul* ARACIS. Dacă sunt întâlniri între membrii echipei de evaluare, nu este necesară încărcarea înregistrărilor. Se pot organiza și vizite la fața locului, de comun acord cu persoana de contact de la domeniul evaluat. *If additional meetings are organized with the representatives of the higher education institution or with other interested parties, they will be organized in online format, as the case may be, by the evaluated institution or by the evaluation team, and the records will be uploaded to ARACIS' cloud. If there are meetings between the members of the evaluation team, it is not necessary to upload the records. On-site visits may also be arranged, in agreement with the contact person of the evaluated domain.*



Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
Marți / Tuesday, 21.09.2021			
09:00-09:50	Activități de evaluare <i>Evaluation activities</i> Domeniu⁶: Întâlnire online a comisiei de experți evaluatori cu responsabilul domeniului de studii universitare de doctorat evaluat și cu echipa care a realizat raportul de evaluare internă <i>Domain: Online meeting with the contact person for the doctoral study domain under review and the team who drafted the internal evaluation report</i>	Comisia de evaluare domeniu: <i>Domain evaluation panel</i> -membrii comisiei de experți evaluatori domeniu <i>members of domain evaluation panel</i> - responsabilul domeniului de studii universitare de doctorat evaluat și echipa care a realizat raportul de evaluare internă <i>The doctoral studies domain contact person and the team who drafted the internal evaluation report</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> Domeniu/Domain Ingineria sistemelor/System engineering - în afara programului/outside schedule Ingineria chimică /Chemical engineering https://us02web.zoom.us/j/81860167058?pwd=NjhVcXVzTWNmRHB2b1V4WGFDOUU5Zz09 Inginerie mecanică / Mechanical engineering https://us02web.zoom.us/j/87606332739?pwd=bUFxNW51aEkydUozS3JlYURSVlY4QT09 Mine, petrol, gaze / Mine, oil, gas https://zoom.us/j/96048100021?pwd=aDJONzlvSEkxRVl4WkZDVjNRYzJWZz09
10:00-10:50	Activități de evaluare <i>Evaluation activities</i> IOSUD: Întâlnire online a comisiei de experți evaluatori cu directorul CSUD/directorii școlilor doctorale din IOSUD supus procesului de evaluare și cu echipa care a realizat raportul de evaluare internă <i>IOSUD: Online meeting with the director of CSUD / directors of doctoral schools and the team who drafted the internal evaluation report</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - membrii comisiei de experți evaluatori IOSUD <i>members of IOSUD evaluation panel</i> - reprezentanți ai CSUD și ai școlii/școlilor doctorale/ IOSUD <i>representatives of CSUD and of doctoral school(s)/IOSUD</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/86827314814?pwd=aUlxV0d5c09FRitKvWcwU1FqYk10QT09
11:00-11:50	Activități de evaluare <i>Evaluation activities</i> Domeniu⁷: Întâlnire online a comisiei de experți evaluatori cu personalul didactic aferent domeniului evaluat <i>Domain: Online meeting with the academic staff corresponding to the doctoral study domain</i>	Comisia de evaluare domeniu <i>Domain evaluation panel</i> -membrii comisiei de experți evaluatori domeniu <i>members of domain evaluation panel</i> -cadre didactice cu titlul de conducător de doctorat <i>Doctoral coordinators</i>	Înregistrare audio-video/ platforma Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> Domeniu/Domain Ingineria sistemelor/System engineering - în afara programului/outside schedule Ingineria chimică /Chemical engineering https://us02web.zoom.us/j/89928253648?pwd=a1hiWFJlVjVzTit1aHREeDdXlglvQT09

⁶ Pentru toate întâlnirile din program unde se menționează domeniu, se vor organiza 3 întâlniri în paralel pentru cele 3 domenii de studii universitare de doctorat din componența IOSUD. *For all the timetable meetings where the domain is mentioned, 3 meetings will be organized in parallel for the 3 doctoral university studies domains within IOSUD.*

⁷ În cazul în care se organizează întâlniri suplimentare cu reprezentanții instituției de învățământ superior sau cu alte părți interesate, acestea se vor organiza în format online, după caz, de către instituția evaluată sau de către echipa de evaluare, iar înregistrările se vor încărca în *cloud-ul* ARACIS. Dacă sunt întâlniri între membrii echipei de evaluare, nu este necesară încărcarea înregistrărilor. Se pot organiza și vizite la fața locului, de comun acord cu persoana de contact de la domeniul evaluat. *If additional meetings are organized with the representatives of the higher education institution or with other interested parties, they will be organized in online format, as the case may be, by the evaluated*



Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
			Inginerie mecanică / Mechanical engineering https://us02web.zoom.us/j/82633115795?pwd=SiNiaTZOUTZ2K1p4bGJmY3FMQ0Yzd09 Mine, petrol, gaze / Mine, oil, gas https://zoom.us/j/94754130974?pwd=TUxHZDJxRUh5RFVAc0g5ZWwvMGk5Zz09
12:00-12:50	Activități de evaluare <i>Evaluation activities</i> <u>IOSUD</u> : Întâlnire online a comisiei de experți evaluatori cu personalul didactic aferent școlilor doctorale din IOSUD <i>IOSUD: Online meeting with IOSUD academic staff</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - membrii comisiei de experți evaluatori IOSUD <i>members of IOSUD evaluation panel</i> - cadre didactice cu titlul de conducător de doctorat <i>Doctoral coordinators</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/85920673430?pwd=TG1haXhHS2E5N3ZkTWN3bkQyVmpjUT09
13:00-13:50	Activități de evaluare <i>Evaluation activities</i> <u>Domeniu</u> : Întâlnire online a comisiei de evaluare cu studenții doctoranzi <i>Domain: Online meeting with PhD students</i>	Comisia de evaluare domeniu <i>Domain evaluation panel</i> - membrii comisiei de experți evaluatori domeniu <i>members of domain evaluation panel</i> - studenții doctoranzi <i>PhD students</i>	Înregistrare audio-video/ ARACIS platforma ZOOM <i>Audio-video recording / ARACIS platform ZOOM</i> Domeniu/Domain Ingineria sistemelor/System engineering https://us02web.zoom.us/j/88004279267?pwd=bXNUMWFTUENyUTZekhDdU1hVXkdz09 Ingineria chimică /Chemical engineering https://us02web.zoom.us/j/81845496268?pwd=VFBXcHc4RWlrK0JlUDlvcnA0NGd3QT09 Inginerie mecanică / Mechanical engineering https://us02web.zoom.us/j/81161804739?pwd=UDJuNUNUUzNGOFpNRit1WHNVcW1MZz09 Mine, petrol, gaze / Mine, oil, gas https://us02web.zoom.us/j/86523110346?pwd=TGtpK1pkK0tvcnA0b0M2VWJoL0dydz09
14:00-14:50	Activități de evaluare <i>Evaluation activities</i> <u>IOSUD</u> : Întâlnire online a comisiei de evaluare cu studenții doctoranzi <i>IOSUD: Online meeting with PhD students</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - membrii comisiei de experți evaluatori IOSUD <i>members of IOSUD evaluation panel</i> - studenții doctoranzi <i>PhD students</i>	Înregistrare audio-video/ platforma ARACIS ZOOM <i>Audio-video recording /ARACIS ZOOM platform</i> https://us02web.zoom.us/j/88690143757?pwd=U0NBTTThEcVduYjVNNFdhQ09nTzVrdz09
15:00-17:00	Continuarea activităților de evaluare a domeniilor de studii universitare de doctorat și IOSUD	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i>	Se lucrează separat.⁸ (în acest interval de timp, coordonatorul IOSUD/DSUD are în vedere și comunicarea cu

⁸ În cazul în care se organizează întâlniri suplimentare cu reprezentanții instituției de învățământ superior sau cu alte părți interesante, acestea se vor organiza în format online, după caz, de către instituția evaluată sau de către echipa de evaluare, iar înregistrările se vor încărca în *cloud-ul* ARACIS. Dacă sunt întâlniri între membrii echipei de evaluare, nu este necesară încărcarea înregistrărilor. Se pot organiza și vizite la fața locului, de comun acord



Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
	<i>Continuation of the doctoral study domain and IOSUD evaluation activities</i>	- la nivel de IOSUD <i>at IOSUD level</i> - la nivel de domenii de doctorat <i>at doctoral study domain level</i>	membrii comisiei privitor la desfășurarea evaluării IOSUD/DSUD) <i>Independent evaluation activities. (during this time frame, the IOSUD/DSUD Coordinator also envisages the communication with the panel members regarding the conduct of the IOSUD/DSUD evaluation)</i>
Miercuri / Wednesday, 22.09.2021			
09:00-09:50	Activități de evaluare <i>Evaluation activities</i> <u>Domeniu:</u> Întâlnire online cu directorii/responsabilii centrelor/laboratoarelor de cercetare aferente domeniului de studii universitare de doctorat <i>Domain: Online meeting with the Directors/ persons in charge of the research centers/laboratories within the doctoral study domain</i>	Comisia de evaluare domeniu <i>Domain evaluation panel</i> - membrii comisiei de experți evaluatori domeniu <i>members of domain evaluation panel</i> -directorii centrelor / laboratoarelor de cercetare <i>directors of research centers/laboratories</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> Domeniu/Domain Ingenieria sistemelor/System engineering (în afara programului / outside schedule) Ingenieria chimică /Chemical engineering https://us02web.zoom.us/j/82158416306?pwd=NFI2bm4wUFhOc2MzVGtnL3h5VkpNUT09 Ingenierie mecanică / Mechanical engineering https://us02web.zoom.us/j/86164417660?pwd=Nkw2WWNRMVVfb2xGcmNtYjI0UXdUdz09 Mine, petrol, gaze / Mine, oil, gas https://zoom.us/j/92811368197?pwd=aTJYRTRjNDRGVmx1Ylc4dTIKNzhsUT09
10:00-10:50	Activități de evaluare <i>Evaluation activities</i> <u>IOSUD:</u> Întâlnire online cu directorii/responsabilii centrelor/laboratoarelor de cercetare IOSUD <i>IOSUD: Online meeting with the Directors/ persons in charge of the research centers/laboratories within IOSUD</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - membrii comisiei de experți evaluatori IOSUD <i>members of IOSUD evaluation panel</i> - directorii centrelor / laboratoarelor de cercetare <i>Directors of the research centers/laboratories</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/83689938720?pwd=WTFYVfVdhZGpSRHFsbWZ5M1hONmxQdz09
11:00-11:50	Activități de evaluare <i>Evaluation activities</i> <u>Domeniu:</u> Întâlnire online cu membrii Consiliului școlii /școlilor doctorale (CSD) în cadrul cărora funcționează domeniul evaluat <i>Domain: Online meeting with Doctoral Schools Council (CSD members)</i>	Comisia de evaluare domeniu <i>Domain evaluation panel</i> - membrii comisiei de experți evaluatori domeniu <i>members of domain evaluation panel</i> -membrii CSD <i>CSD's members</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform (este comun pentru toate domeniile/it is a common link for all doctoral domains)</i> https://us02web.zoom.us/j/81776918321?pwd=bkU5TVIreEhtdVBmNDJjSmpNTUpUQT09
12:00– 12:50	Activități de evaluare <i>Evaluation activities</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i>	Înregistrare audio-video/ UPG platforma

cu persoana de contact de la domeniul evaluat. *If additional meetings are organized with the representatives of the higher education institution or with other interested parties, they will be organized in online format, as the case may be, by the evaluated institution or by the evaluation team, and the records will be uploaded to ARACIS' cloud. If there are meetings between the members of the evaluation team, it is not necessary to upload the records. On-site visits may also be arranged, in agreement with the contact person of the evaluated domain.*



Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
	<u>IOSUD</u> : Întâlnire cu membrii Consiliului Studiilor Universitare de Doctorat al IOSUD <i>IOSUD: Online meeting with Doctoral University Studies Council (CSUD) members</i>	- membrii comisiei de experți evaluatori IOSUD <i>members of IOSUD evaluation panel</i> - membrii CSUD <i>CSUD's members</i>	Audio-video recording / UPG platform (este comun pentru toate domeniile/it is a common link for all doctoral domains) https://us02web.zoom.us/j/86129906484?pwd=OVpwY3B4K2lxTE9uVG1VVKkNkMXdoZz09
13:00-13:50	Activități de evaluare <i>Evaluation activities</i> <u>Domeniu</u> : Întâlnire online a comisiei de evaluare cu reprezentanți ai angajatorilor absolvenților domeniului <i>Domain: Online meeting with employers of Doctoral graduates in the domain</i>	Comisia de evaluare domeniu <i>Domain evaluation panel</i> - membrii comisiei de experți evaluatori domeniu <i>members of domain evaluation panel</i> - reprezentanți ai angajatorilor <i>employers' representatives</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> Domeniu/Domain Ingenieria sistemelor/System engineering – în afara programului/outside schedule Ingenieria chimică /Chemical engineering https://us02web.zoom.us/j/88357926424?pwd=b2dhcHFzNzRzbiNNcklhZ0JaWE83UT09 Ingenierie mecanică / Mechanical engineering https://us02web.zoom.us/j/83174129224?pwd=cThYVURVamEzNnZROW5aTytzMThRQT09 Mine, petrol, gaze / Mine, oil, gas https://zoom.us/j/91896461374?pwd=ZVhGUytO51Y4eHJEOTMrc2tMMituUT09
14:00-14:50	Activități de evaluare <i>Evaluation activities</i> <u>IOSUD</u> : Întâlnire online a comisiei de evaluare cu reprezentanți ai angajatorilor absolvenților <i>IOSUD: Online meeting with employers of doctoral graduates</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - membrii comisiei de experți evaluatori IOSUD <i>members of IOSUD evaluation panel</i> - reprezentanți ai angajatorilor <i>employers' representatives</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/85897176514?pwd=N42dUNiVktOWnUvMXBUZnFYaVhEUT09
15:00-18:00	Continuarea activităților de evaluare a domeniilor de studii universitare de doctorat și IOSUD <i>Continuation of the doctoral study domain and IOSUD evaluation activities</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - la nivel de IOSUD <i>at IOSUD level</i> - la nivel de domenii de doctorat <i>at doctoral study domain level</i>	Se lucrează separat. ⁹ (în acest interval de timp, coordonatorul IOSUD/DSUD are în vedere și comunicarea cu membrii comisiei privitor la desfășurarea evaluării IOSUD/DSUD) <i>Independent evaluation activities. (during this time frame, the IOSUD/DSUD Coordinator also envisages the communication with the panel members regarding the conduct of the IOSUD/DSUD evaluation)</i>
Joi / Thursday, 23.09.2021			
10:00-11:00	Întâlnire tehnică online , pentru identificarea aspectelor specifice	- toți membrii echipei de vizită <i>all evaluation panel members</i>	Înregistrare audio-video/ platforma <i>Audio-video recording / ARACIS platform</i>

⁹ În cazul în care se organizează întâlniri suplimentare cu reprezentanții instituției de învățământ superior sau cu alte părți interesante, acestea se vor organiza în format online, după caz, de către instituția evaluată sau de către echipa de evaluare, iar înregistrările se vor încărca în *cloud-ul* ARACIS. Dacă sunt întâlniri între membrii echipei de evaluare, nu este necesară încărcarea înregistrărilor. Se pot organiza și vizite la fața locului, de comun acord cu persoana de contact de la domeniul evaluat. *If additional meetings are organized with the representatives of the higher education institution or with other interested parties, they will be organized in online format, as the case may be, by the evaluated institution or by the evaluation team, and the records will be uploaded to ARACIS' cloud. If there are meetings between the members of the evaluation team, it is not necessary to upload the records. On-site visits may also be arranged, in agreement with the contact person of the evaluated domain.*



Intervalul orar / Hour	Activitate / Activity	Participanți / Participants	Observații/ Responsabil Comments/ Responsible
	care trebuie clarificate, dacă este cazul, pe parcursul vizitei la fața locului <i>Online technical meeting to identify specific issues that need to be clarified, if necessary, during the on-site visit</i>		https://us02web.zoom.us/j/82422746643?pwd=aXRlVkdDdNcXR2RTBwazhBQU9PMjZlZz0
11:00-18:00	Reuniuni de lucru față în față ¹⁰ , vizitarea bazei materiale didactice și de cercetare <i>Face-to-face working meetings, visiting the educational and research infrastructure</i>	- directorul de misiune și coordonatorul, un student doctorand evaluator <i>the Evaluation Director and the coordinator of the IOSUD evaluation panel, one student</i> - reprezentanți ai universității <i>university's representatives</i>	Vizită UNIVERSITATE <i>Site visit to the university</i>
Vineri / Friday, 24.09.2021			
09:00-10:00	Finalizarea documentelor <i>Completion of the evaluation documents</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - la nivel de IOSUD <i>at IOSUD level</i> - la nivel de domenii de doctorat <i>at doctoral study domain level</i>	Se lucrează separat. (În acest interval de timp, coordonatorul IOSUD/DSUD are în vedere și comunicarea cu membrii comisiei privitor la desfășurarea evaluării IOSUD/DSUD) <i>Independent evaluation activities. (during this time frame, the IOSUD/DSUD Coordinator also envisages the communication with the panel members regarding the conduct of the IOSUD/DSUD evaluation)</i>
10:00-10:50	Întâlnire online pentru concluzii <i>Online meeting for conclusions</i>	- toți membrii echipei de evaluare <i>all evaluation panel members</i>	Înregistrare audio-video/ platforma ARACIS ZOOM <i>Audio-video recording /ARACIS ZOOM platform</i> https://us02web.zoom.us/j/83609933090?pwd=MFByM0NzZnQ2bjREVEM2bEhpaE1pdz09
11:00-12:00	Întâlnire finală online în vederea prezentării principalelor constatări rezultate în urma evaluării IOSUD și a recomandărilor de îmbunătățire a calității <i>Meeting with representatives of the institution under review to discuss on the conclusions of the evaluation process and the main recommendations</i>	Comisia de evaluare IOSUD <i>IOSUD evaluation panel</i> - toți membrii echipei de evaluare <i>all evaluation panel members</i> - reprezentanții universității <i>university's representatives</i>	Înregistrare audio-video/ UPG platforma <i>Audio-video recording / UPG platform</i> https://us02web.zoom.us/j/89287265816?pwd=VkJ5SU5ncKZKTmhkO0kwdFwaEw0QT09

Prof. univ. dr.

Prof.univ.habil.dr. ing. Dinu Florinel

Director de misiune

Rector

¹⁰ Experții evaluatori la nivelul domeniilor de studii universitare de doctorat pot stabili independent programul vizitei la fața locului, de comun acord cu persoana de contact de la domeniul evaluat și respectând programul întâlnirilor comune cu restul membrilor echipei de evaluare. *The evaluators at doctoral study domain level can independently establish the program of the on-site visit, in agreement with the contact person for the evaluated domain and respecting the schedule of joint meetings with the rest of the evaluation panel members.*