Annex No. 3

The External Evaluation Report of a Doctoral Study Domain

Contents

I. Introduction[1]

Today, Galaţi is the center of heavy industry in Romania. The city has the largest Romanian ironworks (Sideks, part of Mittal Steel). The port and the shipyard are also important. In addition to these branches of the economy, the city has a textile factory, mills and fish processing. Galaţi graduated from the university in 1974.

Dunăreade Jos University in Galaţu Center has grown into a specialized professional knowledge, to train competitive human resources, at the labor market level, to seek professionals with complex professional skills and abilities to transfer technology to the socio-economic environment.

Research, development, innovation and technology transfer as well as tools to connect specialized education that the university proposes with the increasingly diversified demand of economic entities, institutions, companies and other potential employers, in direct connection with the socio-economic development of Dunăre de Josare. The history of „The Dunărea de Jos ”University of Galați– beginning with 1948 –attests to the continuous scientific development and extension of the concerns of professors and researchers both in terms of the actual educational activity and that of top academic research– fact attested by the classification of our institution, by Romanian Agency for Quality Assurance in Higher Education(ARACIS), within the category of education and scientific research universities. Furthermore, in December 2018, „Dunărea de Jos ”University of Galați obtained the certification according to the SR EN ISO 9001:2015 standard for research, development and innovation activities carried out at the university, faculties and research units levels, accredited at the institutional level (http://www.ugal.ro/cercetare). In this context, and based on an already conclusive and rich in achievements history, “Dunărea de Jos ”University of Galaţi is an institution organizing doctoral studies (IOSUD), and those doctoral programs are carried out in 16 doctoral fields, under the coordination of 101 doctoral supervisors.

The field of doctoral studies ELECTRICAL ENGINEERING is part of the School for Doctoral studies in Fundamental and Engineering Sciences. According to the MEN Order 6129/2016 regarding the

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

minimum necessary and mandatory standards, the field of doctoral studies in Electrical Engineering falls under Annex 9 -Electrical Engineering Committee(CNATDCU).

SCHOOL FOR DOCTORAL STUDIES IN FUNDAMENTAL AND ENGINEERING SCIENCES			
Crt. no.	**CNATDCU COMMITTEE**	**FIELD OF DOCTORAL STUDIES**	**FACULTY**
1	Committee no. 9 **Electrical Engineering**	**Electrical Engineering**	**AUTOMATION, CAMPUTERS, ELECTRICAL AND ELECTRONICAL ENGINEERING**

The general mission of the field of doctoral studies in electrical engineering is to ensure the development of advanced knowledge corresponding to the third cycle of university studies to publicly present the doctoral thesis and be applicable in the economy. The strategy of the doctoral study of electrical engineering is to develop an educational environment that corresponds to current technological progress, following scientific progress as well as international recognition of research results through scientific papers and scientific projects creating highly qualified human resources.

The goal of the field of electrical engineering is the use of research-innovation in electrical engineering following the interdisciplinary fields of its application. Expanding research at the international level, creating partnerships with quality educational institutions in the country and abroad, research programs, human resources, capitalization of scientific results to develop scientific applications and fundamental research, promoting excellence in electrical engineering, codes of professional ethics, ensuring the right to freedom of opinion, knowledge and religion in the academic community, defense and promotion of fundamental rights and freedoms of members of the academic community, taking care of disabled people, developing diversity and tolerance, taking into account the gender category and developing a strategy of innovation and entrepreneurship in electrical engineering.

We start our mission of evaluation 12.7.2021 from 09:00 – 09:45 Romanian time with a Meeting of panel members for discussing main methodological aspects related to the evaluation of studies. We are talking about evaluation and meet with other members of the same domain of interest.

12.07.2021 continue from 10:00 to 10:45 with an online preliminary meeting for the preparation and harmonization of evaluation steps, in hybrid mode, of doctoral study domains and IOSUD. Together with *all evaluation panel members, representatives of the University's management, representatives of the CSUD and of the Doctoral School /Schools, the contact person for IOSUD / doctoral domains*

12.07.2021 continue from 11:00 to 12:30 with an Online meeting with the contact person for the doctoral study domain under review and the team who drafted the internal evaluation report of domain Electrical Engineering together with The doctoral studies domain contact person and the team who drafted the internal evaluation report

12.07.2021 continue from 12:30 to 13:30 with Online meeting with the director of CSUD / directors of doctoral schools and the team who drafted the internal evaluation report and representatives of CSUD and of doctoral school(s)/IOSUD

12.07.2021 continue from 13:30 to 14:30 with Online meeting with IOSUD academic staff together with members of IOSUD evaluation panel and doctoral coordinators for domain Electrical Engineering

13.07.2021 starting from 11:45 to 13:45 start with an Online meeting with the members of the Ethics Commission, IOSUD&domains evaluation panel, all evaluation panel members and Ethics Commission members

13.07.2021 continue from 14:30 to 15:30 with Online meeting with graduates for the respective doctoral study domain of Electrical Engineering, members of the domain evaluation panel, representatives of doctoral graduates.

13.07.2021 continue from 17:00 to 18:00 with an Online technical meeting to identify specific issues that need to be clarified, if necessary, during the on-site visit, all evaluation panel members.

14.07.2021 starting from 09:00 to 10:00 with Online meeting with the Directors/ persons in charge of the research centers/laboratories within IOSUD, members of IOSUD evaluation panel and Directors of the research centers/laboratories.

14.07.2021 continue from 10:00 to 11:00 with Online meeting with Doctoral University Studies Council (CSUD) members, members of IOSUD evaluation panel and CSUD's members.

14.07.2021 continue from 11:15 to 12:15 Online meeting with employers of doctoral graduates, members of IOSUD evaluation panel, members of IOSUD evaluation panel and employers' representatives.

15.07.2021 continue from 11:30 to 12:30 Online meeting for conclusions with IOSUD&domains evaluation panel and all evaluation panel members.

15.07.2021 continue from 12:30 to 13:30 Meeting with representatives of the institution under review to discuss the conclusions of the evaluation process and the main recommendations , IOSUD&domains evaluation panel with all evaluation panel members and university's representatives.

II. Methods used

The logical framework, or log frame, is the most common and best-known planning tool used in international development. It is also the most hotly debated. Originally designed for use in simple time-bound projects, it is now the tool of choice for donors in interventions ranging from small projects to organizational core funding. The logical framework is often used as a basis for monitoring and evaluation.

A logical framework can have many different purposes depending on the context, and it is probably this that has made it so popular. It was originally conceived as a planning tool, aimed at supporting the management of planned processes. However, depending on the circumstances, a log frame can be:

- a planning tools.
- a tool for program management.
- the basis for M&E in a project or program.
- an accountability mechanism.
- a succinct summary of a piece of work.
- a 'window' into the work of an organization or complex program.
- a linear theory of change; or
- a mechanism for seeking fundin

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

Narrative summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
Goal:			
Objectives:			
Outputs:			
Activities:			
Inputs:			

Starting with the narrative summary column, the goal defines the longer-term impact that a project or program aims to contribute to. The goal may be designed to be achieved after completion of the project or program and may depend on the actions of many different agencies, as well as changes in the external environment. The next row down deals with the objectives or purpose of the project or program – the changes it hopes to directly influence over its lifetime. The outputs row includes the tangible products or services the project or program aims to produce. The last two rows deal with the activities of the project or program and the resources required (inputs).

The second column – objectively verifiable indicators – defines what information will be collected to indicate whether or how far the goal, objectives and outputs have been achieved. The third column – means of verification – indicates the sources that will be used to collect the indicators, such as interviews, observation, or secondary sources. The final column identifies the key risks and assumptions that might influence the success or otherwise of the project or program.

III. Analysis of ARACIS's performance indicators

Domain A. INSTITUTIONAL CAPACITY

**general description of domain analysis.*

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

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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.

"Dunăreade Jos" University of Galați is extraordinary quality University that takes a mission to generate and transfer knowledge towards society through initial and permanent training at the university and postgraduate level with the purpose of personal development, professional insertion of the individual, and through scientific research, development, innovation, and technological transfer, through individual and collective creation, as well as capitalizing on and disseminating their results.

"Dunăreade Jos" University of Galați offers to all the members of the community the necessary conditions for harnessing personal skills through education, scientific research, and socio-cultural activities. "Dunăreade Jos" University of Galați takes on the role of cultural and civic center meant to contribute to training and disseminating cultural values, promoting pluralism of options and to the development of civic and political culture, as well as the role of scientific and technological creation pole to support all economic, educational and social units in the region."Dunăreade Jos" University of Galați accomplishes its mission by achieving the following objectives:

1.Training specialists with higher education for education, science and culture, health, technical, economic, legal, social activities according to the study programs within the structure of the university, the educational standards and the requirements of the society;

2.Updating and improving the training of specialists through master's, doctoral, postdoctoral and post-university studies and permanent education programs;

3.Ensuring the quality of the educational activity at the level of national and international standards through:-perfecting the educational plans, the subjects' sheets, and the didactic methods of teaching and evaluation so that the programs will be adapted to the requirements of the social-economic environment and appropriate concerning the qualifications market and increasing the insertion degree of students and graduates on the labor market;

4.Developing advanced, fundamental, and applied research through:-increasing the human potential and the material resources of research units;-stimulating the research groups to participate in national and international competitions for financial support by stimulating participation within international-level research, development, innovation programs;

5.Ensuring the quality management of the didactic, research, and administrative activities through the Board of Quality led by the Rector.

6.Knowing the realities and tendencies of the Romanian, European, and worldwide higher education by having the members of the academic community participate in national and international development, research, innovation, and scientific events and programs;

7.Developing and modernizing the educational, scientific research, and micro-production material base;

8.Permanent development of the information system connected to national and international networks which will satisfy the integration requirements in the information society;

9.Permanent development, modernization, and computerization of the university's library and of the entire information base and connecting it to national and international information sources;

10.Awarding all types of titles, orders, and medals provided in the national system of university and post-university diplomas.

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.*

Recommendations:

The indicator is fulfilled.

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

**general description of the standard analysis.*

Performance Indicator A.1.2.1. *The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic backgrounds.*

- *Dunărea de Jos" University of Galaţi has an information system that manages students' activities, study programs, facilitates the collection, processing and analysis of data and information relevant for institutional quality assessment and assurance. The IT system is implemented and managed by the Digital Informatics and Communications Department. From the academic year 2012-2013, an application for schooling management, management of study programs and job descriptions has been developed, which is updated annually, according to needs.*
- *University website (www.ugal.ro) together with the pages of the faculties and departments provides information on study programs, teaching staff, student facilities, regulations, procedures and other useful documents, announcements of current events and any information relevant to students or prospective students.*
- *The University website is of extraordinary quality with all information for doctoral and postdoctoral students.*

Recommendations:

- *Translate all documents on the website to English.*

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.*

"Dunărea de Jos" University of Galaţi uses a dedicated software to verify the similarity index of all doctoral theses, namely www.sistemantiplagiat.ro "Dunărea de Jos" University of Galaţi ensures the verification of the authenticity and originality of doctoral theses and other scientific papers with the help of the program www.sistemantiplagiat.ro recognized by the National Council for Attestation of University Degrees, Diplomas etc..

Recommendations:

- *Using an international expert in commission for PhD study and always translate doctoral thesis into English. In this way similarity on English and translation part of the thesis will be reduced to the minimum.*

The indicator is fulfilled.

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

**general description of the standard analysis.*

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

- *-At the level of Electrical Engineering within the Doctoral School of Electrical Engineering there is 4 research grant with European funding which includes a doctoral supervisor Prof. univ. dr. habil.ing. Marian GĂICEANU (field of Electrical Engineering within SD IEE). It takes place within the European projects: „Integrated Regenerative Electric Drive System" (period April 2012-2016), http://www.regensys.ugal.ro/ , „Innovative high-efficiency power system for machines and devices, increasing the level of work safety in underground mining excavations" (HEET II), financed by the program "Research Fund for Coal and Steel", Grant Agreement nr. 899469/2020RFCS, 2020-2023, Collaborative project with France nr. 771 /30.06.2014, 2015-2016, Prof. univ. dr. habil. ing. Bogdan HNATIUC, "Treatment and prevention of Biofouling using non-thermal plasma at atmospheric pressure", Prof. univ. dr. habil. ing Petru LIVINȚI, "Small power multi-source system for supplying an isolated site", Contract Nr 19-AUF, 2016*

Recommendations:

- *University must use more EU grants for foreign PhD and postdoctoral students to have the possibility to be excellent in education and to increase the internationality of the study of Electrical Engineering.*

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%.*

- *During the academic year 2020-2021 in the field of doctoral studies ELECTRICAL ENGINEERING,8 doctoral students carry out their activity, of which 6 in stage, 1 in extension and 1 in grace period. From the 8 doctoral students, a 2 were are financially supported for at least six months by research or institutional development/ human resources grants, which represents 25%; 4 of the 8 doctoral students in the stage are financially supported by research and institutional development grants of at least six months, which represents 50%*

  Recommendations:
- *In the future is recommended more private sources for doctoral and postdoctoral study.*

The indicator is fulfilled.

Performance Indicator *A.1.3.3.[2] *At least 10% of the total amount of doctoral grants obtained by the university through institutional contracts and of tuition fees collected from the doctoral students enrolled in the paid tuition system is used to reimburse professional training expenses of doctoral students (attending conferences, summer schools, training, programs abroad, publication of specialty papers or other specific forms of dissemination, etc.).*

- *Many doctoral students have big support from doctoral grants for the conference, summer schools, training, publication in ISI papers, etc. This money is more than 10% and in some cases pay 50% from grant to support doctoral activities.*
- *The amount collected by SD-SFI during 2015-2020 is 6,238,825lei, and the expenses of 841.259 lei, which means a percentage of 13.48%. For the doctoral field of ELECTRICAL ENGINEERING, the amount collected during 2015-2020 is 929,733 thousand lei, and the expenses of 93,725 thousand lei, which means a percentage of 10.08%.*

Recommendations:
The indicator is fulfilled.

Criterion A.2. Research infrastructure

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

Performance Indicator A.2.1.1. *The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission*

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

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.

- *IOSUD-UDJG and SD-SFI have a research infrastructure that very well supports the development of activities specific to doctoral studies. It is available on the PORTAL OF RESEARCH UNITS from"Dunărea de Jos" University of Galaţi*
- *PhD students have an institutional research center (SICECAPC). Students have access to 16 excellent laboratory centers. 3 of them are excellent and for Electrical Engineering.*
- *The research units (UC) (institute, research centers, laboratories) within the"Dunărea de Jos" University of Galați (UDJG) carry out research, development and innovation (RDI) and university creation activities, in fundamental fields organized at a national level. , with the mission to develop fundamental and applied research, following the Research - Development - Innovation Strategy (RDI) 2016 - 2020 of the university, with permanent alignment with RDI strategies at the national and international level.*

Recommendations:
The indicator is fulfilled.

Criterion A.3. Quality of Human Resources

**general description of the criterion analysis.*

Standard A.3.1. At the level of each domain, there is sufficient qualified staff to ensure the conduct of a 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.*

- *Dunărea de Jos University of Galați, Doctoral school of ELECTRICAL ENGINEERING filling the minimum standards by doctoral supervisors in the field of ELECTRICAL ENGINEERING:*
- *Fulfillment of 25% of the minimum CNATDCU standards in the field of ELECTRICAL ENGINEERING from SD-SFI in the period 2014-2018:*
- *Prof. univ. dr. habil.ing.GĂICEANU Marian, 2017, Complies 25% of OM / 5137.35 points 3424.9%*
- *Prof. univ. Dr. habil. eng. HNATIUC Bogdan, 2015, Complies 25% of OM / 606.48 points, 404.57%*
- *Prof. univ. Dr. habil. eng. LIVINȚI Petru, 2016, Partially fulfills 25% of OM / 318.59 points 212%.*
- *Calculation sheets calculation of individual minimum standards, to meet at least 25% of the score required by CNATDCU minimum standards for qualification in the field of ELECTRICAL ENGINEERING from the Doctoral School of Fundamental Sciences, for the last 5 years (2014-2020).*

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.*

- *Within the doctoral field of study Electrical Engineering, 3 doctoral supervisors carry out their scientific activity, of which 1 is post holder of IOSUD-UDJG, having a full-time unfixed period employment contract in „Dunărea de Jos" University ofGalați, and 2 doctoral supervisors are associated to IOSUD-UDJG*

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.*

- *The subjects in the training program based on advanced university studies related to the field of Electrical Engineering within SD IEE are supported by teachers who have the quality of doctoral supervisor / habilitated, all teaching staff being Professors -members of SD IEE, with proven expertise in the field of taught subjects.*
- *In our university, the occupation of teaching positions is done based on a methodology, approved by the University Senate, in which the conditions for putting up for competition teaching and research positions are provided, for an indefinite or determined period. The comparative situation of the occupied and vacant teaching positions on December 31, 2018 and 31 December 2019 is presented in the following table:*

The distribution of teachers by December 31, 2019, compared to 2018 is the following:

Teaching positions (occupied and vacant)	Number (31.12.2018)	Number (31.12.2019)	Weight [%] (in 2019)
Professors	188	183	15.84%
speakers	261	258	22.34%
SI / lectori	427	450	38.96%
ASSISTANT	266	264	22.86%
TOTAL	1142	1155	100%

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 programs[3] does not exceed 20%.*

- *There were no situations in which a doctoral supervisor coordinated at the same time more than 8 students or 12 in the period of doctoral studies (3years to which are added the extension periods).*
- *Within the doctoral field ELECTRICAL ENGINEERING, the maximum number of doctoral students coordinated by a doctoral supervisor between 2020-2021 is 5.*

Recommendations:
The indicator is fulfilled.

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

**general description of the standard analysis.*

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

- *Each of the PhD supervisors in the field of Electrical Engineering has at least 5 Web of Science indexed publications, which include international contributions that reveal progress in scientific research.*
- *The international visibility of doctoral supervisors in the last five years is highlighted in the Minimum Standards Sheets by membership in the scientific committees of international publications and conferences, membership in the boards of international professional associations, guest quality at conferences or groups of experts conducted abroad:*

Recommendations:
The indicator is fulfilled.

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

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.*

- *In the case of PhD supervisors in the field of Electrical Engineering within SD IEE, all 3 PhD supervisors continue to be scientifically active (100%).*

Recommendations:
The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

**general description of domain analysis.*

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

**general description of the criterion analysis.*

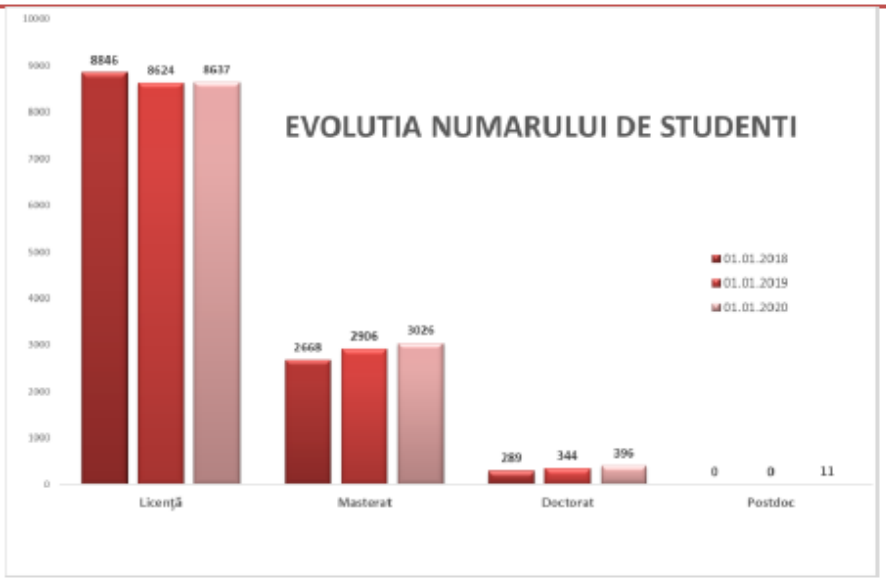
Standard B.1.1. The institution organizing doctoral studies has the capacity to attract candidates from outside the higher education institution or a number of candidates exceeding the number of seats available.

**general description of the standard analysis.*

Performance Indicator *B.1.1.1. *The ratio between the number of graduates of masters' programs of other higher education institutions, national or foreign, who have enrolled for the doctoral admission contest within the past five years and the number of seats funded by the state budget, put out through contest within the doctoral domain is at least 0.2 or the ratio between the number of candidates within the past five years and the number of seats funded by the state budget put out through contest within the doctoral studies domain is at least 1,2.*

- *The number of students enrolled on January 1, 2020, increased slightly compared to January 1, 2019, by 1.65%. The phenomenon was determined by the increase by 15.11% of the number of students enrolled in doctoral studies and by the increase by 4.13% of the number of students enrolled in master studies. The number of students enrolled in undergraduate studies increased slightly, by 0.15%.*
- *The average ratio between the number of master's degree candidates from other educational institutions in the country or abroad who registered for admission to doctoral studies in the last 5 years and the number of seats financed from the state budget within SD-SFI is 0.48*

Reporting date	Number of students				TOTAL
	License	MASTERS	doctorate	Postdoc	
01.01.2018	8846	2668	289	-	11803
01.01.2019	8624	2906	344	-	11874
01.01.2020	8637	3026	396	11	12070



Recommendations:

The indicator is fulfilled.

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

**general description of the standard analysis.*

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

- *The selection criteria for admission to doctoral study programs are specified in the Doctoral School Regulations*
- *Candidates for doctoral admission are assessed according to the level of training and information in the field, the ability to address specific research problems, formulate innovative solutions and the quantifiable results of previous scientific research.*
- *The rate of rejected students is 0%.*

Recommendations:

The indicator is fulfilled.

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

- *Within the doctoral field ELECTRICAL ENGINEERING, there weren't identified any expulsions/dropouts of the doctoral students, 3 years after the admission*
  Recommendations:
  The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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

- *A training program based on advanced academic studies comprises three core courses, one of which refers to the Methodology of scientific research within SD -IEE (Art. 23, paragraph (4) of the ROFSUD SD-IEE REGULATION*
- *The curriculum contains 3 relevant subjects for the preparation of doctoral students in scientific research: Academic writing for the fields of technical sciences and research project management, English for scientific and engineering purposes and Scientific research ethics and academic integrity.*

  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.*

- *In addition to the Ethics and Academic Integrity course, Research Methodology in the Doctoral School -SD IEE contains the subject Scientific research ethics and academic integrity*

  Recommendations:
  The indicator is fulfilled.

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

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 activities*[5].

- *At the level of the Doctoral in Electrical Engineering, mechanisms are developed to ensure that the training program based on advanced university studies, related to the evaluated fields, aims at "learning outcomes", specifying the knowledge, skills and abilities that Doctoral students should acquire after going through each subject.*
- *The files of the courses in the curriculum specify the competencies, responsibility and autonomy acquired by the doctoral students after completing the related training program. The course sheets are analyzed and approved by the SD-SFI Committee*

In 2019, the graduates of the 2018 promotion completed the questionnaire. The employment situation is summarized in the following table.

Nr. crt.	Nr. graduates	Nr. absolv. which they completed the survey	Nr. graduates staff	The employment is In domain	In another domain	Nr. absolv. without a job at 1 year of to graduate	Continuation of studies Yes	No
1.	**2850**	751	568	367	201	183	324	427
2.		26.35% of the total graduates	75.63% out of the total questioned	64.61% from total employees	35.38% from total employees	24.36% out of the total questioned	43.14% out of the total questioned	56.85% out of the total questioned

Recommendations:
The indicator is fulfilled.

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

- *All doctoral students benefit during the entire doctoral training period from the counseling/guidance of Advisory committees composed of the doctoral supervisor and three specialists in the field/fields in which the doctoral student carries out his / her activity.*
- *Based on this questionnaire, the insertion of graduates on the labor market is monitored, as well as the evolution of their level of satisfaction. The questionnaires are processed by the Career Counseling and Guidance Center.*
- *Quality management at UDJG proposes a model to approach the total quality of services and processes, focused on the procedural and systemic approach, on the total involvement of each employee, and aims at long-term success, by meeting the requirements of internal and external customers and creating benefits for the university and society.*

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

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.*

- *In 2019, within the 14 faculties within the "Dunărea de Jos" University of Galaţi, 773 incumbents carried out their activity. The number of students enrolled on January 1, 2019 was 12070, which results in an average of 15.61 students for a teacher.*
- *Within the doctoral field of Electrical Engineering from SD IEE, the ratio between the number of doctoral students and the number of teachers/researchers who provide guidance is 14/16 =1.311*

Recommendations:
The indicator is fulfilled.

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

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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

- *The "Dunărea de Jos" University of Galaţi has a system for the periodic evaluation of teaching, research and management activities that is constantly used, improved from year to year and which has become a basic component in the culture of quality.*
- *The university remains a regional leader in the field of higher education, through the study programs it offers and the importance of research contracts;*
- *There are competent human resources, organized pyramidally, for each study program; University research has international and national recognition, transparency in the university's ranking among top research universities, based on a large number of research contracts, ISI listed publications, investment in infrastructure and involvement of young researchers, PhD students, postdocs extended;*

Recommendations:
- *Recommendation for Electrical Engineering to insist on applied science papers. In the future Electrical Engineering according to trends in the development of electrical vehicles and renewable energy and waste energy.*

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.*

- *The 7 doctoral students who were awarded the PhD title in the last 5 years have 34 papers presented at prestigious international scientific events (conducted in the country or abroad). Of these, 33 are international conferences indexed in the IEEE Xplore database.*

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.
**general description of the standard analysis.*

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

- *In the last 5 years, no more than one doctoral thesis per year has been completed for a doctoral 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 a minimum of ten doctoral theses have been presented within the past five years should be analyzed.*

- *In the field of Electrical Engineering from SD IEE, in the last five years,7 doctoral theses have been defended.*

Recommendations:
The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

**general description of domain analysis.*

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

**general description of the criterion analysis.*

Standard C.1.1. There are an institutional framework and procedures in place and relevant internal quality assurance policies, applied for monitoring the internal quality assurance.

**general description of the standard analysis.*

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

(a) the scientific work of Doctoral advisors;

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

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

d) the scientific activity of doctoral students;

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

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

- *The scientific activity of doctoral supervisors was carried out during an academic year. This is the number of publications in relevant journals and the degree of fulfillment of the minimum standards for the award of the habilitation certificate, in force in the academic year subject to evaluation, the number of doctoral students who have completed their studies within three years from the date of enrollment out of the total number of doctoral students and who have publicly defended the thesis.*
- *Infrastructure and facilities necessary for carrying out the research activity is analyzed how the funds of the doctoral school were used to improve the infrastructure and facilities necessary to carry out the research activity in the academic year subject to evaluation like the number of doctoral students financially supported to publish/participate in conferences; organizing symposia, summer schools, etc..*
- *Subsequent procedures and rules based on which doctoral studies are organized like analysis of the degree of fulfillment of the obligations mentioned in the curriculum by the doctoral students coordinated by each doctoral supervisor.*
- *Analysis of the reasons why the doctoral students could not be complete the doctoral program within three years from the date of enrollment.*

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 them to identify their needs, as well as their overall level of satisfaction with the doctoral study program 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.*

- *In the "Dunărea de Jos" University of Galaţi there is a Quality Council (CC) led by the rector, coordinated by the vice-rector with quality problems, which has in its structure the Commission for evaluation and quality assurance (CEAC) and the Quality Department (CoC). . The Commission for quality evaluation and assurance and the Quality Department is structured with composition and attributions in the field of quality, approved by the Senate.*
- *The "Dunărea de Jos" University of Galaţi has a system for the periodic evaluation of teaching, research and management activities that is constantly used, improved from year to year and has become a basic component in the culture of quality.*
- *Recognition of the professional-scientific value of the members of the academic community from UDJG by:*
- *participation in management commissions and boards and quality assurance of education and scientific research at the national level;*
- *The quality of experts for the evaluation of scientific research projects and programs and educational, at national and international level;*
- *The quality of reviewers or members in the editorial committees of some representative magazines from the main international scientific flow.*
- *The quality of the study was distributed like a questionary. 98% of PhD student was told that is excellent study.*

Recommendations:
The indicator is fulfilled.

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

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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

(a) the Doctoral School regulation;
(b) the admission regulation;
(c) the doctoral studies contract;

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

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

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

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

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

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

- *In the academic year 2019-2020, as in previous years, admission to all faculties of the university was made by the competition, with the support of knowledge testing (Faculty of Automation, Computers, Electrical and Electronic Engineering, Faculty of Medicine and Pharmacy) and with tests of competences (Faculty of Physical Education and Sports, Faculty of Arts). To attract the candidates or organized caravans of admission in Galati county, but also in the neighboring counties, the study programs carried out in the university were popularized in the media, the Open Gates Days were organized.*

Academic year	Doctoral school of Mechanical engineering and Industrial		School doctoral degree science fundamentally and Engineering		Doctoral school of Socio-social sciences humanity		Doctoral school of Biomedical sciences		TOTAL IOSUD-UDJG	
	Budget	Toll	Budget	Fee	Budget	Toll	Budget	Toll	Budget	Toll
2017-2018	29	16	26	14	34	8	0	0	89	38
2018-2019	22	2	30	20	24	12	0	0	76	34
2019-2020	26	3	24	0	26	9	5	17	81	29

- *Admission to the doctorate is made based on a methodology and a schedule established by the Council for doctoral studies. In IOSUD-UDJG, doctoral studies are carried out in four multidisciplinary doctoral schools: Doctoral School of Mechanical and Industrial Engineering, Doctoral School of Fundamental and Engineering Sciences, Doctoral School of Socio-Human Sciences and Doctoral School of Biomedical Sciences.*
- *The Doctoral School of Electrical and Energy Engineering provides all doctoral students with access to the resources necessary to carry out doctoral studies, by:*
  -access to the literature;
  -depending on the topic of the thesis;
  -access to modern research laboratories, which are very well equipped;
  -access to the research teams to which the doctoral students are integrated;
  -access to specialized laboratories at industrial partners -under research and development contracts

Recommendations:

- *More PhD and postdoctoral PhD study of Electrical Engineering based on English language.*

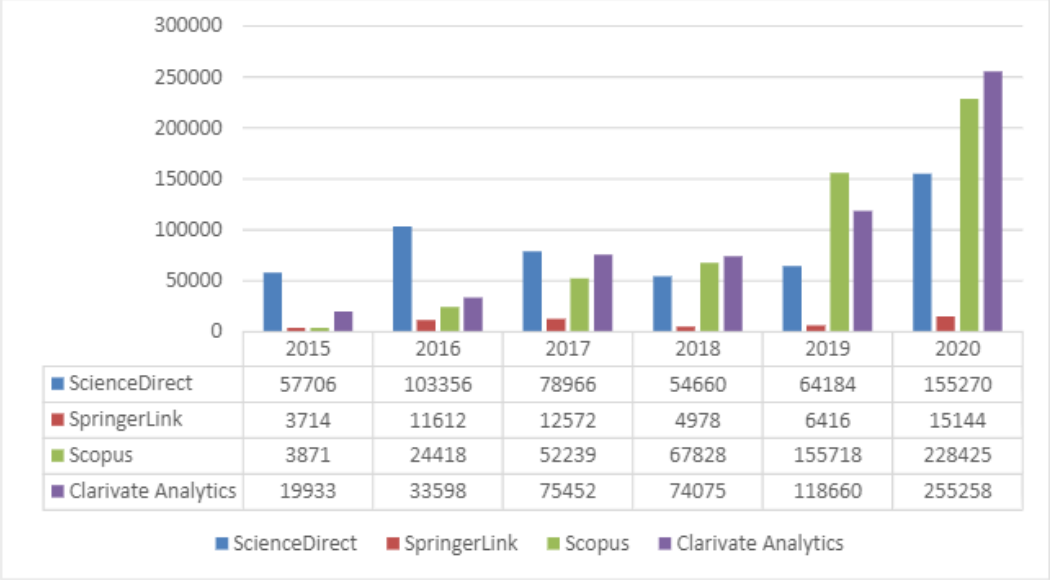
The indicator is fulfilled.

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

**general description of the standard analysis.*

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

- *The library of the UDJG is a scientific cultural structure, of public law, without legal personality, functioning as a unit related to the University.*
- *The library of the UDJG., access doctoral students to more phases of full text multidisciplinary scientific data, specialized full text, bibliographic and bibliometrics (UDJG being a member of the ANELIS PLUS Association): Science Direct Freedom Collection , Springerlink Journals, Cambridge Journals, Ebsco Business Source Complete, American Institute of Physics - Journals (AIP), IEEE/IET Electronic Library (IEL), MathSciNet, Clarivate Analytics - Web of Science Core Collection, InCites Journal Citation Reports, Derwent Innovations Index, Scopus, both from the university campus based on the recognition of institutional IPs, as well as from outside it (access mobile for PhD students, teachers and researchers).*



	2015	2016	2017	2018	2019	2020
ScienceDirect	57706	103356	78966	54660	64184	155270
SpringerLink	3714	11612	12572	4978	6416	15144
Scopus	3871	24418	52239	67828	155718	228425
Clarivate Analytics	19933	33598	75452	74075	118660	255258

Fig. 1 Numărul de accesări la bazele de date abonate (2015-2020)

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.*

- *Il doctoral students are granted access to the system of verifying the degree of similarity with other scientific creations through the verifying system of „Dunăreade Jos"University of Galați. having an electronic system for verifying the degree of similarity: with sistemantiplagiat.ro*

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.*

- *All doctoral students have access to scientific research laboratories or other facilities specific to the field of Electrical Engineering, according to internal rules.*
- *All doctoral students are granted access to scientific research laboratories within the Research Centers mentioned at the criterion A.2.1.1. Doctoral students within the field of ELECTRICAL ENGINEERING carry out research activities within the Research center, expertise and technology transfer in electrical engineering SICECAAC and Research centerSCAP.*
- *Some doctoral students have access to research laboratories or testing laboratories within companies with which some doctoral supervisors have concluded research contracts*
- *Doctoral students have access, based on ID, to libraries, reading rooms, laboratories, rooms equipped with computers of the faculty, according to the provisions of study contracts and legislation in force on the schooling of all students.*

Recommendations:

- *Build virtual joint access laboratory for better online activities of PhD students. This means virtualize real laboratories and give access to students to training in virtual space, before starting real laboratory work.*

The indicator is fulfilled.

Criterion C.3. Internationalization

**general description of the criterion analysis.*

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

**general description of the standard analysis.*

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

- *Through the International Mobility and Community Programs Service, the university supports student mobility, especially under the Erasmus program. The situation of students incoming and outgoing for the academic year 2018-2019 is presented below.*

KA 103

OUTGOING STUDENTS						
	Sem. 1			Sem. 2		
	Nr. student	Nr. months	Nr. days	Nr. student	Nr. months	Nr. days
studied	14	49	19	2. 3	109	7
TOTAL	37 students / 158 months + 26 days					
Practice	-	-	-	39	105	5
TOTAL	39 students / 105 months + 5 days					
INCOMING STUDENTS						
	Sem. 1			Sem. 2		
	Nr. student	Nr. months	Nr. days	Nr. student	Nr. months	Nr. days
studied	33	165	-	29	145	-
TOTAL	62 students / 310 months					

KA107

INCOMING STUDENTS						
	Sem. 1			Sem. 2		
	Nr. student	Nr. months	Nr. days	Nr. student	Nr. months	Nr. days
studied	-	-	-	4	12	16
TOTAL	4 students / 12 months + 16 days					

KA202

INCOMING STUDENTS						
	Sem. 1			Sem. 2		
	Nr. student	Nr. months	Nr. days	Nr. student	Nr. months	Nr. days
studied	-	-	-	6	30	-
TOTAL	6 students / 30 months					

- *. All 5 doctoral students from the doctoral field of study ELECTRICAL ENGINEERING who completed their doctoral studies between 2016-2020 had at least one participation within international scientific conferences.*
- *The big majority of doctoral students who carry out their activity in the academic year 2020-2021 participated to scientific conferences (AnnexC.3.1.1_1_Participari conferinte doctoranzi in stagiu)(4out of8-50%)*
-

Recommendations:

- *The institution must increase the number of PhD students in Erasmus projects incoming and outgoing abroad. Internationalization is a key to education success in the future.*

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.*

- *At the Research Center SICECAPC, the director of the center and also coordinator of the field of Electrical Engineering within SD-SFI, Prof.Dr.Marian Gaiceanu, has organized the International Symposium, under IEEEUSA-The 5th INTERNATIONAL SYMPOSIUMON ELECTRICAL AND ELECTRONICS ENGINEERING, 23 –25 July 2014, Galaţi, Romania.*

- *The Faculty of Automation, Computers, Electrical and ElectronicEngineering of „Dunărea de Jos" University of Galaţi, in partnership with Ministry of Innovation and Research and Institute of Advanced Technologies, but also of the research centers Integrated Energy Conversion Systems And Advanced ControlComplex Processes(SICECAPC)and Automated Process Management Systems (SCAP), organized between 20 -22 October 2017, International Electrical and Electronic Engineering Symposium-ISEEE 2017*
- *The Honorary Chairmen of the last three editions were: Prof.Dr.Eng. Francesco Profumo, former minister of Education, Universities and Research in Italy, member of the Europe Academy in the field of Physics and Engineering Sciences, and Prof.Dr.Eng.Marian Piotr Kaźmierkowski, member of the Polish Academy of Sciences, Dean of Engineering Sciences Division, professor at „Warsaw University of Technology" from Poland. Over 100 specialists and doctoral students (including from SD-SFI) from the country and abroad(Sweden, Turkey, China, Hungary, Republic of Moldova, Croatia, France and Poland).*
  Recommendations:
- *There have been presented 9 lecturers invited of whom 1 from France -Université du Havre, Le Havre, France,1 from Development and Testing National Institute for Electrical Engineering - ICMET Craiova, Romania and 7 from prestigious Universities from Romania.*
  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.).*

- *OSUD-UDJG and respectively the School for Doctoral Studies in Fundamental and EngineeringScienceshas have a strategy and it applies, to increase the degree of internationalization of doctoral studies, according to the information presented on IOSUD website:http://www.ugal.ro/anunturi/stiri-si-evenimente/5707-universitatea-dunarea-de-jos-din-galati-promoveaza-invatamantul-superior-romanesc-la-geneva.*
  Recommendations:
- *Internationalization is a key for a future for an excellent University. This level of Erasmus, Ceepus and other mobilities must be doubled in the future.*
  The indicator is fulfilled.

IV. SWOT Analysis

Strengths:	Weaknesses:
The university remains a regional leader in the field of higher education, through the study programs of Electrical Engineering it offers and the importance of research contracts; The university offers to study a program in an area of Electrical Engineering for a doctorate for full-time, part-time and distance learning;	The low share of research funding from private funds; The low level of attractiveness of the teaching and/or research career; big companies have more money than universities. Some areas do not have continuity in doctoral training.

One of the best Doctoral school is Electrical Engineering The university offers study programs with teaching in English, for master's studies; web: www.ugal.ro The “Lower Danube” University of Galaţia was evaluated by EUA, ARACIS, MECTS and CNFIS, and in 2018 it again obtained the grade “High degree of trust”; There is an adequate material basis for education and research activities, in continuous improvement and modernization; There are competent human resources, organized pyramidally, for each study program; University research has international and national recognition, transparency in the university's ranking among top research universities, based on a large number of research contracts, ISI-listed publications, investment in infrastructure and involvement of young researchers, PhD students, postdocs extended; The University has adopted and implemented a strategy and operational plan for research and innovation compatible with the latest trends at the European and national level; Research centers have been reorganized; The regulatory framework for doctoral and post-doctoral programs was adopted - as institutional and methodological premises for the emergence of research poles; The intensification of the European mobility programs Erasmus, Erasmus +, Erasmus Mundus has continued; The general principles of quality assurance take into account transparency, compatibility and convertibility. In the strategic plan of the “Dunărea de Jos” University of Galați, the quality is essential and constantly improving; The material base is characterized by the existence of modern equipment for education and research, provides optimal conditions for teaching, as well as practical work in pilot units and experimental stations;	Case studies are not always the result of practical work done by PhD students; Low efficiency of technology transfer in case of research results (with poor funding), in the current economic environment; Insufficient visibility concerning EU universities. Increased level of internationalization is a key for a future for an excellent University.

All students have access to library services, databases, Internet, dormitory accommodation, social programs, sports facilities, as well as three canteens-restaurants. PhD students are very satisfied with their level of education. Many of them are working and continue working in other Universities in Romania or big Companies in Romania.	
Opportunities: Development of collaboration networks and partnerships with foreign universities; Accessing specific grants for student practice; Collaboration with the economic environment for possible technological transfers, service offers, consultancy, initiation of study programs; The interest was shown by young people from various countries in and outside the European space to pursue doctoral degree programs, through the educational offer in languages of international circulation; Use the HORIZON 2020 strategy to encourage and support the university's research programs; Development of new European programs such as "Lifelong learning", Postdoctorate and e-Platforms; Development of existing partnerships with public institutions and the private environment, with the role of generating new sources of financing; Reconfiguring the relations between the public authorities, the university and the economic environment; Generalization of the values of a culture of quality at the level of university education and research; The existence of a dynamic economic environment that requires graduates; The possibility of accrediting new doctoral fields, full of English language; Development of partnerships with other European universities for doctoral studies;	Threats: Funding for higher education and research may lead to insufficient funding for the academic process; Domestic and international competition: open competitions to attract students, quality resources and funds; An aggressive policy of Electrical Engineering in attracting doctoral and postdoctoral students; National legislation that does not stimulate the attraction of foreign students (from outside the EU); A lack of interest of high school graduates for the Doctoral Study; The current economic context, only with a few relevant economic actors; The payment of state employees does not allow financial incentives for research activity; The risk of absorbing funds lower than forecast and for which expenses have been incurred; .

Imposing the organization as a partner for the regional economic and social environment; Requirements for participation in projects with companies and institutions in the area of Electrical Engineering	

V. Overview of judgments awarded and of the recommendations

No.	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations
1	***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.*	***The indicator is fulfilled.***	
2	***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	***The indicator is fulfilled***	

		Studies with subsequent amendments and additions.		
3	***A.1.2.1.***	The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic backgrounds.	***The indicator is fulfilled***	Translate all documents on the website to English.
4	***A.1.2.2.***	The existence and use of a software program and evidence of its use to verify the percentage of similarity in all doctoral theses.	***The indicator is fulfilled***	Using an international expert in commission for PhD study and always translate doctoral thesis into English. In this way similarity on English and translation part of the thesis will be reduced to the minimum.
5	***A.1.3.1.***	Existence of at least one research or institutional/human resources development grant under implementation at the time of submission of the internal evaluation file, per doctoral study domain under evaluation or existence of at least 2 research or institutional development / human resources grant for the doctoral study domain, obtained by doctoral thesis advisors operating in the evaluated domain within the past 5 years. The grants address relevant themes for the respective domain and, as a rule, are engaging doctoral students.	***The indicator is fulfilled***	University must use more EU grants for foreign PhD and postdoctoral students to have the possibility to be excellent in education and to increase the internationality of the study of Electrical Engineering.
6	****A.1.3.2.***	The percentage of doctoral students active at the time of the evaluation, who for at least six months receive additional funding sources besides government funding, through scholarships awarded by individual persons or by legal entities, or who are financially supported through research or institutional/human resources development grants is not less than 20%.	***The indicator is fulfilled***	In the future is recommended more private sources for doctoral and postdoctoral study.
7	****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.).	***The indicator is fulfilled***	

8	***A.2.1.1.***	The venues and the material equipment available to the doctoral school enable the research activities in the evaluated domain to be carried out, in line with the assumed mission and objectives (computers, specific software, equipment, laboratory equipment, library, access to international databases etc.). The research infrastructure and the provision of research services are presented to the public through a specific platform. The research infrastructure described above, which was purchased and developed within the past 5 years will be presented distinctly.	***The indicator is fulfilled***	
9	***A.3.1.1.***	Minimum three doctoral thesis advisors within that doctoral domain, and at least 50% of them (but no less than three) meet the minimum standards of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNATDCU) in force at the time when the evaluation is carried out, which standards are required and mandatory for obtaining the enabling certification.	***The indicator is fulfilled***	
10	****A.3.1.2.***	At least 50% of all teaching/research staff involved in teaching/research activities related to training programs for advanced university studies or in individual research/art creation programs have a full-time employment contract for an indefinite period with the IOSUD.	***The indicator is fulfilled***	
11	***A.3.1.3.***	The study subjects in the education program based on advanced higher education studies pertaining to the doctoral domain are taught by teaching staff or researchers who are doctoral thesis advisors / certified doctoral thesis advisors, professors / CS I or lecturer / CS II, with proved expertise in the field of the study subjects they teach, or other specialists in the field who meet the standards established by the institution in relation with the aforementioned teaching and research functions, as provided by the law.	***The indicator is fulfilled***	
12	****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	***The indicator is fulfilled***	

		studying in doctoral programs[6] does not exceed 20%.		
13	***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.	***The indicator is fulfilled***	
14	****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.	***The indicator is fulfilled***	
15	****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*	***The indicator is fulfilled***	

[6] 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.

		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.		
16	***B.1.2.1.**	*Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.*	***The indicator is fulfilled***	
17	***B.1.2.2.***	*The expelling rate, including renouncement / dropping out of doctoral students 3, respectively 4, years after admission[7] does not exceed 30%.*	***The indicator is fulfilled***	
18	***B.2.1.1.***	*The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.*	***The indicator is fulfilled***	
19	***B.2.1.2.***	*At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.*	***The indicator is fulfilled***	
20	***B.2.1.3.***	*The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses „the learning outcomes", specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities*	***The indicator is fulfilled***	
21	***B.2.1.4.***	*All along the duration of the doctoral training, doctoral students in the domain receive counselling/guidance from functional guidance commissions, which is reflected in written guidance and feedback or regular meeting.*	***The indicator is fulfilled***	

[7] 3 years for the doctoral university studies with the duration stipulated at Article 159, paragraph (3), respectively 4 years for the doctoral university studies with the duration stipulated at Article 174, paragraph (3) of the Law of national education No. 1/2011 with subsequent amendments and additions.

22	***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 guidance shall not exceed 3:1.	***The indicator is fulfilled***	
23	***B.3.1.1.***	For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.	***The indicator is fulfilled***	Recommendation for Electrical Engineering to insist on applied science papers. In the future Electrical Engineering according to trends in the development of electrical vehicles and renewable energy and waste energy.
24	****B.3.1.2.***	*For the evaluated domain, the evaluation commission will be provided with at least one paper or some other relevant contribution per doctoral student who has obtained a doctor's title within the past 5 years. From this list, the members of the evaluation commission shall randomly select 5 such papers / relevant contributions per doctoral study domain for review. At least 3 selected papers must contain significant original contributions in the respective domain.*	***The indicator is fulfilled***	
25	****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.*	***The indicator is fulfilled***	
26	****B.3.2.2.***	*The ratio between the doctoral theses allocated to one scientific specialist coming from a higher education institution, other than the institution where the defense on the doctoral thesis is organized, and the number of doctoral theses presented in the same doctoral study domain in the doctoral school should not exceed 0.3, considering the past five years. Only those doctoral study domains in which minimum ten doctoral theses have been presented within the past five years should be analyzed.*	***The indicator is fulfilled***	
27	***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:*	***The indicator is fulfilled***	

		(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.*		
28	***C.1.1.2.**	Mechanisms are implemented during the stage of the doctoral study program to enable feedback from doctoral students allowing to identify their needs, as well as their overall level of satisfaction with the doctoral study program in order to ensure continuous improvement of the academic and administrative processes. Following the analysis of the results, there is evidence that an action plan was drafted and implemented.	***The indicator is fulfilled***	
29	***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 IOSUD/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 the study programs, based on advanced academic studies; (f) the academic and scientific profile and 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 school, with necessary information (year of registration; Advisor);	***The indicator is fulfilled***	

		(h) information on the standards for developing the doctoral thesis; (i) information on the opportunities for doctoral students aiming to attend conferences, to publish articles, awarding scholarships etc. (j) 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.		
30	***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.	***The indicator is fulfilled***	
31	***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.	***The indicator is fulfilled***	
32	***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.	***The indicator is fulfilled***	Build virtual joint access laboratory for better online activities of PhD students. This means virtualize real laboratories and give access to students to training in virtual space, before starting real laboratory work.
33	****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.	***The indicator is fulfilled***	The institution must increase the number of PhD students in Erasmus projects incoming and outgoing abroad. Internationalization is a key to education success in the future.
34	***C.3.1.2.***	In the evaluated doctoral study domain, support is granted, including financial support, to the organization of	***The indicator is fulfilled***	

		doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.		
35	***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.).	***The indicator is fulfilled***	*Internationalization is a key for a future for an excellent University. This level of Erasmus, Ceepus and other mobilities must be doubled in the future.*

VI. Conclusions and general recommendations

After full evaluation Dunăreade Jos University in Galaţu Doctoral study of Electrical Engineering, documents and talking with professors, rectors, deans, students, company, chiefs of laboratories, etc.. and after reading plans and programs, annexes, and all other documents, I have only one decision. Dunăreade Jos University in Galaţu is an extraoridinary quality University. Doctoral study of Electrical Engineering on All 35 indicators are fulfilled. In the future, University in Galaţu needs more collaboration activities every year according to the Internationalization Doctoral Study and the quality of resources for this study.

Dunăreade Jos University in Galaţu, Faculty of Electrical Engineering, a fundamental field of study Engineering Sciences, doctoral studies Electrical Engineering fulfilled all 35 indicators for of IOSUD evaluation.

Date: 18.7.2021

VII. Annexes

In the academic year 2020-2021 in the field of doctoral studies ELECTRICAL ENGINEERING, 8 doctoral students carry out their activity, 1 having an extension period and 1 being in a grace period

Doctoral students had a training program based on academic studies with subjects relevant to their scientific research subjects, research methodology, ethics in scientific research etc.

PhD students have an institutional research center (SICECAPC). Students have access to 16 excellent laboratory centers. 3 of them is very good for Electrical Engineering.

The research units (UC) (institute, research centers, laboratories) within the" Dunărea de Jos" University of Galați (UDJG) carry out research, development and innovation (RDI) and university creation activities, in fundamental fields organized at a national level. , with the mission to develop fundamental and applied research, following the Research - Development - Innovation Strategy (RDI) 2016 - 2020 of the university, with permanent alignment with RDI strategies at the national and international level.

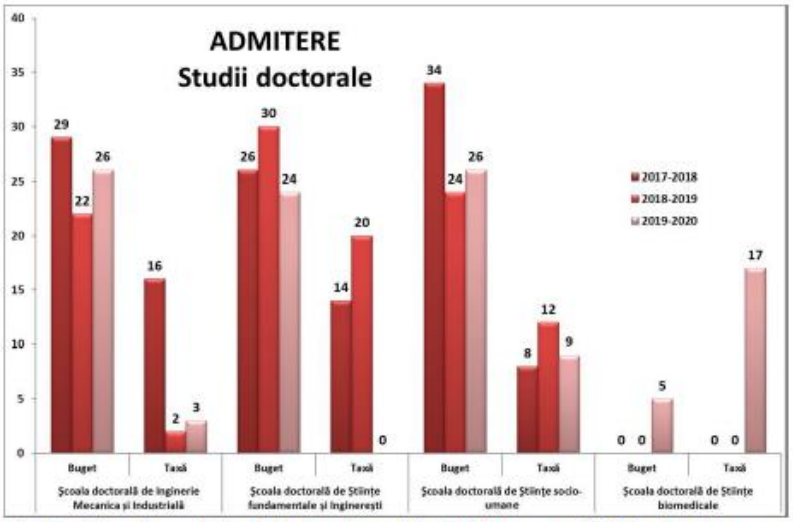
Within „Dunărea de Jos" of Galaţi operate management system of quality, designed as every component of the system–faculties, departments, research units, SCHOOLS FOR DOCTORAL STUDIES, postdoctoral schools, libraries, support services for the education process, etc..

Within „Dunărea de Jos" University ofGalaţi, there is the Quality Assessment and Assurance Board/ Quality Board of UDJGwhich applies the assumed policy regarding quality assurance.

The Quality Board exists according to the Regulation of organizing and functioning of the quality board(Annex1.3.5_ROF-CC), in full accordance with the national, European and international dynamics in the field of Electrical Engineering.

Admission to the doctorate is made based on a methodology and a schedule established by the Council for doctoral studies. In IOSUD-UDJG, doctoral studies are carried out in four multidisciplinary doctoral schools: Doctoral School of Mechanical and Industrial Engineering, Doctoral School of Fundamental and Engineering Sciences, Doctoral School of Socio-Human Sciences and Doctoral School of Biomedical Sciences. The four doctoral schools bring together groups of doctoral supervisors from the faculties of engineering and exact sciences, from the faculties with economic and humanistic profiles and the Faculty of Medicine and Pharmacy. Tuition figures for 2019 show an increase in budgeted places by 6.58% in 2019 compared to 2018. The number of fee-paying places decreased by 14.71% in 2019 compared to 2018.

Academic year	Doctoral school of Mechanical engineering and Industrial		School doctoral degree science fundamentally and Engineering		Doctoral school of Socio-social sciences humanity		Doctoral school of Biomedical sciences		TOTAL IOSUD-UDJG	
	Budget	Toll	Budget	Fee	Budget	Toll	Budget	Toll	Budget	Toll
2017-2018	29	16	26	14	34	8	0	0	89	38



Currently, in the "Dunărea de Jos" University of Galați there are 106 doctoral supervisors in 16 accredited fields.

The number of students enrolled on January 1, 2020, increased slightly compared to January 1, 2019, by 1.65%. The phenomenon was determined by the increase by 15.11% of the number of students enrolled in doctoral studies and by the increase by 4.13% of the number of students enrolled in master studies.

Academic year	Doctoral school of Mechanical engineering and Industrial		School doctoral degree science fundamentally and Engineering		Doctoral school of Socio-social sciences humanity		Doctoral school of Biomedical sciences		TOTAL IOSUD-UDJG	
	Budget	Toll	Budget	Fee	Budget	Toll	Budget	Toll	Budget	Toll
2017-2018	29	16	26	14	34	8	0	0	89	38

There is an improvement in the total number of students during a calendar year. One cause of the relatively constant number of students enrolled in undergraduate studies could be the small number of high school graduates who pass the baccalaureate exam, but also the reduced educational offer in the form of distance or part-time education. Last but not least, we must admit that every year a significant number of students drop out of university. For the academic year 2019-2020, it should be noted that there are 11 postdoctoral researchers enrolled in the EAVAP program.

At the end of 2019, the research infrastructure of the "Dunărea de Jos" University of Galați includes 34 institutionally accredited research units, 18 units ranked in the category of units of excellent. Proposal and financing, from the Institutional Development Fund, of the project: Research of excellence from the "Dunărea de Jos" University of Galați - pole of competitiveness and scientific and applied performance, CNFIS-FDI-2019-0063, with a budget of 270,000 lei. a 67 papers were published in ISI-rated journals, 34 papers in the volumes of some events scientific indexed ISI Proceedings, 47 papers in

BDI indexed journals; 17 events were organized; 3 gold medals, 2 special prizes, 3 first prizes, a diploma of excellence at fairs of inventions and innovations; revenues were collected from 14 research contracts, being in the middle of 2019 collected the amount of 2278390,106 lei.

In 2019, the amount of 50,000 lei was allocated from the CNFIS-FDI-2019-0063 project budget for the purchase of new components for the equipment within two research units: Technological Engineering Research Center in Machine Building - replacement of the control panel of the measuring machine in Tesa Micro-Hite 3D coordinates; Naval Architecture Research Center: modernization of the experimental hydrodynamic tunnel. The total value of these acquisitions was 61,400 lei, the difference being ensured from the university's funds (co-financing).

Project proposals in which the university has participated as coordinator or partner, distributed through the contribution of the faculties are presented in the tables below.

Table 1 PNCDI III 2015-2020 / P1- Development of the national R&D system

Subprogram / Faculties / no. Motions	BE	reliable	FMF	FSIA	FSJSP	FSM	FT	TOTAL	Budget
PD - Postdoctoral research projects						1		1	250,000 lei
TE - Research projects to stimulate young independent teams	2		1	2			1	6	2,700,000 lei
MC- Mobility projects for researchers	3	3		2	1	3		11	157,200 lei

Table 2 PNCDI III 2015-2020 / P2- Increasing the competitiveness of the Romanian economy through RDI

Subprogram / Faculties / no. Motions	FACE	BE	AFB	FIFT	FMF	FSIA	FSM	FT	tOTAL IT	Budget
PED - Demonstration experimental project	2	1 2	8	1	1	6	4	1	35	12,324,326 lei
PTE - Transfer project to the economic operator	3					2		1	6	2,040,000 lei

Table 3 PNCDI III 2015-2020 / P3- European and international cooperation

Subprogram / Faculties / no. Motions	FACE	F and B	AFB	FSIA	FSJSP	DFCTT	tOTAL IT	Budget
3.1 Bilateral / multilateral (except for the bilateral program with AUF)		1		1			2	91,700 lei
3.2 Horizon 2020	1	1	4	5		1	12	2,711,975 euros
3.6 Support / Projects Support of representation					1		1	72,776 lei

Table 4 Other national / international programs

Program / Faculties / no. Motions	FACIEE	FEEA	EFAMA	BE	reliable	FSIA	FSM	FT	TOTAL	Budget
Sector plan				1				1	2	3,200,000 lei
MEN-UMPFE ROSE			1		1					702,380 lei
EEA & Norway Grants	1	1		1		3			6	2,180,000 euro
ENI CBC Black Sea Basin Joint Operational Program 2014-2020				2		1				300,000 euro
JINR - Joint Institute for Nuclear Research / Institute united for research Nuclear							3		3	54,880 USD
UNESCO / L'OREAL FOR WOMEN IN SCIENCE							2			84,000 euro
INTERREG_Transnational Danube				1						
MpRP - DPRRP / Education - „Nicolae Iorga "								2		77,000 lei
ERASMUS +	5			4	1	2				396,700 euro

Table 6 Participation of the faculties in the competitions for financing national / international projects

Program / Faculty	PNCDI III 2015-2020 P1	PNCDI III 2015-2020 P2	PNCDI III 2015-2020 P3	Other programmer	programmer operational	Total Motions /faculty
FA	-	-	-	-	-	0
FACIEE	-	5	1	6	1	13
HAY	-	-	-	-	-	0
FEEA	-	-	-	1	1	2
EFAMA	-	-	-	1	-	1
BE	5	12	2	9	3	31
reliable	3	8	4	2	-	17
FIFT	-	1	-	-	-	1
FL	-	-	-	-	-	0
FMF	1	1	-	-	-	2
FSIA	4	8	6	6	-	24
FSJSP	1	-	1	-	-	2
FSM	4	4	-	5	-	13
FT	1	2	-	3	-	6
DFCTT	-	-	1	-	3	4

(source: SCDI- based on submitted project proposal forms)

Table 7 Funding programs and number of contracts performed

program	Number total	UDJG coordinator	UDJG partner	Contracted in the year 2018
PNCDI III 2015-2020	22	9	13	2
International research and cooperation	40	14	26	15
Applied research	22	22	-	14
Operational programs POC, POCU, PNDR	19	9	10	11
Complementary funding programs for higher education MEN-UMPFE-ROSE, CNFIS-FDI	14	14	-	9
VP-UDJG research grants	6	6	-	3
TOTAL	**123**	**74**	**49**	**49**

Table 8 Number of contracts performed by the faculties

Program / Faculty	FACIEE	HAY	FEAA	(DFPD)	BE		FIFT	FL	FMF	FSIA	FSJSP	FSM	FT	UC *	DFCTT	UDJG
National programs	2	-	1	-	8	-	-	-	2	2	-	6	-	-	-	1
Research and cooperation International	7	-	1	1	4	1	-	1	-	6	1	7	3	1	-	-
COST programs	-	-	-	-	-	1	-	-	-	2.5	-	3.5	-	-	-	-
Applied research	1	2	-	-	8	2	-	-	2	5	-	2	-	-	-	-
programmer operational	2	-	3	1	4	-	1	-	-	1	-	5	-	-	2	-

Table 9 Scientific papers published in WOS-rated journals or ISI-indexed conferences

Total works, from which:	Proceedings paper	Articles	Q1	Q2	Q3	Q4	EXIT	FI> 5
402	318	48	55	51	109	57	75	20

source: WEB OF SCIENCE / ian. 2020

The top 10 areas in which Web of Science (Clarivate Analytics) have been published are presented in Figure 1.

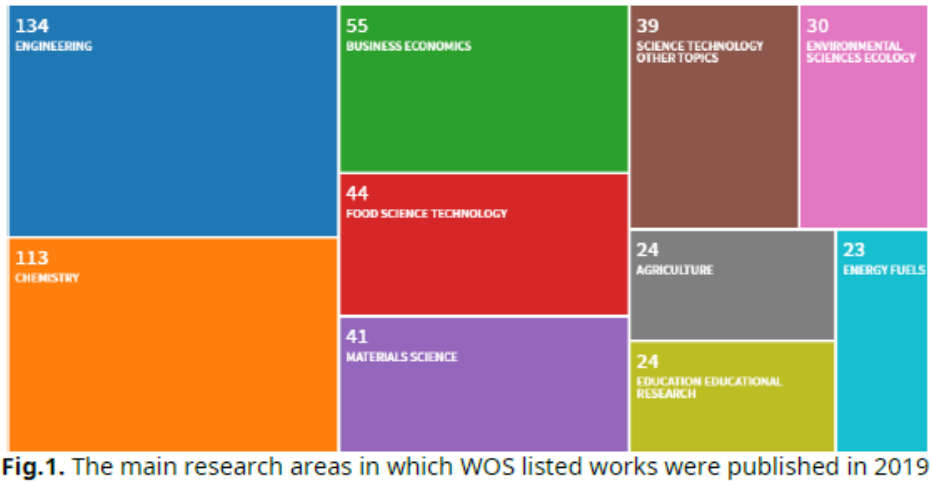


Fig.1. The main research areas in which WOS listed works were published in 2019

(Web source of Science Databases)

During 2019, 197 scientific events were organized within the faculties. Among the 32 scientific events that had international participation. For the scientific quality of the works presented by the students, 256 prize diplomas were awarded, with a total value of 34,570 lei. 2,159 scientific papers presented in 77 sections of all faculties were evaluated.

Results of RDI 2019 activity *

The results of the RDI activity, carried out during 2019 within the faculties, are presented in the table below, reported according to the FRACS criteria, representing:

Nr. crt.	Description
1	Teaching support manuals: teaching papers, laboratory guidance, design, etc., including those published internally, in printed form, without ISBN or in electronic format, online, with the mention of the web address to which they can be accessed
2	Educational and continuing education projects
3	Coordination of university, postgraduate study programs, organization and coordination of training and continuous development programs
4	National and international exhibitions in prestigious galleries and museums
5	Sports activities, cups / championships / competitions by branches and sports at university, local, national and international level
6	ISI Web of Science articles
7	BDI articles
8	Articles published in the volumes of national or international conferences
9	National patents, including creations of art, literature, music, etc., recognized at national level (UGAL institutional affiliation)
10	International patents, including internationally recognized creations of art, literature, music, etc. (UGAL institutional affiliation)
11	New products with intellectual property rights
12	Monographs, specialized books with original content, chapters in collective volumes, book translations published at national or international publishers
13	Editing / coordinating volumes published by national or international publishers
14	Research projects funded by national / international / third party funds
15	Initiative in attracting research funds through projects submitted in grant competitions or RENAR laboratories accreditation / re-accreditation initiative
16	Awards
17	Associate professor / visiting / university teacher at a university abroad, for a period of at least 2 weeks or carrying out a postdoctoral internship lasting at least one month at a university abroad
18	WCH Hirch Index (min-max)
19	Hirch Scope (min-max)
20	Hirch GS Index (min-max)
21	Keynote speaker at representative conferences (international or with international participation)
22	Doctoral / habilitation theses completed and publicly defended
2. 3	PhD supervisor
24	Member of the doctoral guidance committee
25	Referent in the doctoral / habilitation committee
26	Referent of articles published in journals
27	Organizing international conferences or with international participation
28	Members in editorial boards of journals
29	Members in academies, organizations, prestigious professional associations, national and international, membership in organizations in the field of education and research
30	Invited presentations in the plenary of national and international scientific events and guest lecturer (excluding ERASMUS)
31	Concert / Recital / Performance, as a composer, conductor, director, soloist, member of the band chamber for up to 10 people, with explicit affiliation to the university
32	Representing the university in local, national and international sports competitions
33	Responsible for an institutionally accredited research unit
34	Management, analysis and evaluation experience in research and / or education