

The Romanian Agency for Quality Assurance in Higher Education



External Evaluation Report (REE) for the procedure for maintaining accreditation of Doctoral Study Domain – Industrial Engineering

Higher Education Institution/Education Provider Organization:	"Vasile Alecsandri" University of Bacău
Doctoral School:	School of Doctoral Studies
Doctoral Domain:	Industrial Engineering
The objective of the external evaluation:	Maintaining accreditation

Members of the ARACIS Evaluation Panel

No.	Last Name and First Name	Team role	Signature
1.	<i>IONESCU Nicolae</i>	Expert evaluator	
2.	<i>DULGHERU Valeriu</i>	International Expert	
3.	<i>ASOLTANEI Adriana-Mariana</i>	PhD Student Evaluator	

I. Introduction

The commission made up of Prof. Nicolae IONESCU (*National University of Science and Technology Politehnica Bucharest*), Prof. Valeriu DULGHERU (*Technical University of Moldova in Chisinau*) and Stud. Adriana Mariana ASOLTANEI (*"Gheorghe Asachi" Technical University of Iași*), approved by the ARACIS Council through HC no. 152/H/07.05.2026, traveled, between 17.06 – 18.06.2026, to the "*Vasile Alecsandri*" University of Bacău (UBc), for the external quality assessment in order **to maintain the accreditation** of the field of doctoral studies in *Industrial Engineering*, organized by School of Doctoral Studies (SSD).

The "*Vasile Alecsandri*" University of Bacău is a state higher education institution that has diversified its educational and scientific profile, going through several stages of development, from pedagogical and technical education, to the status of university, acquired in 1991. [The current name](#), "*Vasile Alecsandri*" University of Bacău (UBc), dates back to 2009. The mission of the university, defined by the [University Charter](#), is centered on education and research, with orientation towards regional needs and with openness to academic, economic and social partnerships, at national and international level. The institution's activity is supported by a complex organizational structure, which includes five faculties, [the School of Doctoral Studies](#), [research structures](#), [the Institute for Research, Development, Innovation, Consultancy and Technology Transfer](#), advisory centers, international relations and administrative services.

The University [acquired](#) the quality of IOSUD in 2007, in the fundamental field of Engineering Sciences, initially for the fields of Mechanical Engineering and Industrial Engineering. Subsequently, the doctoral offer was extended by the accreditation of the field [of Environmental Engineering](#), in 2009, and of the field [of Philology](#), in 2022. Currently, IOSUD-UBc organizes doctoral studies through a single SSD, which integrates the three accredited fields. IOSUD's mission is to correlate academic expertise with the requirements of regional development and with the demands of contemporary scientific research, promoting the training of young researchers capable of contributing to innovation, technological progress and socio-economic development. IOSUD's activity is coordinated by the [Council of Doctoral Studies](#), the structure responsible for the strategy of doctoral studies, [specific regulations](#), standards of ethics and deontology, as well as for maintaining the quality of the doctoral process.

[The School of Doctoral Studies, established in 2007](#), is led by the director of the SSD and the [Council of the School of Doctoral Studies](#), a body [elected by vote](#), in which the doctoral supervisors and doctoral students are represented. The activity of the SSD is regulated by the national legislation and by [the university's own regulations](#), being oriented towards the organization of advanced training programs, the coordination of doctoral research and the quality assurance of the training process. As of October 1, 2025, 58 doctoral students were coordinated by 25 doctoral supervisors within the School of Doctoral Studies, with the support of 80 members of the guidance and academic integrity committees. The field of doctoral studies in Industrial Engineering, established in 2007, obtained, following [the ARACIS evaluation in 2021](#), the qualification "Maintenance of accreditation". Its strategy aims to increase the scientific impact of doctoral research, develop human and material resources, promote interdisciplinarity, integrate results into national and international networks of excellence and identify research directions with scientific, economic and sociocultural impact. From the perspective [of learning outcomes](#), the field aims to develop the capacity of doctoral students to initiate complex projects, to assume responsibilities in the research activity and to contribute through creativity and competitiveness to the progress of knowledge and the socio-economic environment.

II. Methods used

UBc requested the external quality assessment in order to maintain the accreditation of the field of doctoral studies in Industrial Engineering according to contract no. 412/15.04.2026. The evaluation commission was approved by the ARACIS Council through HC no. 152/H/07.05.2026 and accepted by UBc. The members of the evaluation commission were notified by ARACIS by email on 23.05.2026 and received access to the internal evaluation report (REI) from the ARACIS electronic evaluation platform. For the periodic evaluation of the field of doctoral studies Industrial Engineering, the evaluation committee used several methods, as follows.

Documents analyzed. The internal evaluation report (REI) and its nine annexes (Annex II.1. Internal Evaluation Report II, Annex II.2. 5-year DC activity, Annex II.3. MCIIA activity 5 years, Annex III. A.2.1. Heritage of educational spaces, Annex III.A.2.2. Software Equipment Research Laboratories, Annex III.A.2.3. Books and periodicals, Annex III A.3.1. PO Centralizer, Annex III B.1.1. Activity of doctoral students, Annex III B.1.2. Results doctors confirmed).

Additional documents requested before and during the on-site visit (annexes in addition). The Commission requested some documents constituted in the following additional annexes: AS1. Proposed Education Plan 2026-2030, AS2. FD_ Scientific Research Report 1_AN II_Sem. 3-4_AF, AS3. FD_ Scientific Research Report 2_3 AN II_IV_AF, AS4. Example 1_PV, AS5. Example 2_PV.

Material base visited: Real and virtual prototyping laboratory Rooms D04, D06; Electron Microscopy Laboratory – Room D07; Artificial Intelligence Laboratory – Room AP5; Laboratory for the study of cold plastic deformation processing Room HP4; Technical Measurements Laboratory HP Hall 5; Mechanical Processing Laboratory Rooms HP6, HP8, HP10; Dynamic Testing Laboratory, HP Hall 13; Virtual Reality Lab Room BP50; AI HUB – BI28

Meetings according to the visit calendar (see the minutes drawn up): representatives of the UBc/IOSUD management (initial and final), the team that carried out the REI, the teaching staff-doctoral supervisors, doctoral students, graduates-doctors, employers, heads of research centers/laboratories, representatives of the organizational structures in the field of quality assurance, representatives of the Informatics and Digital Communications Service, representatives of the management/contact person/CEAC /representatives of organizational structures in the field of quality assurance, members of the Ethics Commission.

III. Judgement on the extent to which the standards and performance indicators are fulfilled

DOMAIN A. Institutional capacity

Criterion A.1. Managerial and administrative structures and processes involving students and other stakeholders

Standard S.A.1.1. Organisational components and institutional processes

The HEI has organisational components in its structure, which function based on adequate competences, responsibilities, processes, and implementation procedures, and ensure an effective management system.

Indicator I.P.A.1.1.1	For delivering the study programme/domain, the HEI has adequate organisational components and an adequate management system, which operate based on methodologies, regulations and procedures that are periodically reviewed as required by law.
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✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

IOSUD - UBc has implemented all the efficient functioning mechanisms regarding the organization of doctoral studies, by: creating an advanced research infrastructure; the preparation of a qualified human potential and well-trained doctoral students, mostly graduates of the institution; the elaboration of the entire package of regulations, procedures, instructions, which ensure the efficient functioning of the entire system regarding doctoral studies and which are constantly updated. UBc has an organisational structure ([Structure of the institution](#) and [Organizational chart](#)) and operates on the basis of [Regulation Senate of the "Vasile Alecsandri" University of Bacău](#). UBc's activity is regulated by [Organization and Functioning Regulations](#). Students are represented in all management structures ([University Charter](#), [Regulations, procedures and methodologies](#)) in accordance with the provisions of the current legislation. At UBc, IOSUD ([IOSUD-UBc's own rules of procedure](#)) operates according to [Regulation](#) on the organization and conduct of doctoral study programs. The executive leadership of IOSUD is carried out by [CSUD](#) established in accordance with [Regulations and procedures](#). The admission of students to doctoral studies is made according to [Admission Regulations](#), adopted by HS of 17.04.2026. The completion of doctoral studies is done according to the Regulation ([Regulations, procedures and methodologies](#)), approved on 10.09.2025, and the elaboration and defense of the doctoral thesis is carried out in accordance with the operational procedure [Organization and carrying out the process of defending doctoral theses](#). The coordination activity of doctoral students in the field of "Industrial Engineering" is ensured by 6 doctoral supervisors ([Industrial Engineering](#)) chosen in accordance with [OMEC No. 667/2007](#) and through the process of [Enable](#) which is regulated ([Regulations, procedures and methodologies](#)) approved on 12.01.2026. UBc has the mechanisms for the equivalence of the diploma and doctoral degree obtained abroad ([Regulations, procedures and methodologies](#)).

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The data presented, including those found during the visit, highlight the existence of an adequate organizational and managerial framework for carrying out doctoral studies in the field of Industrial Engineering. The institutional structures responsible for management, quality, internal managerial control and coordination of doctoral studies are clearly defined, and their functioning is regulated by approved and published documents. The integration of SSD into the IOSUD-UBc structure, the existence of CSUD and CSSD, as well as the publication of relevant information regarding doctoral supervisors, admission, study contract, advanced training program and thesis defense demonstrate an adequate level of institutional transparency and predictability. These elements support the good organization of the evaluated field and the access of interested parties to essential information on the functioning of the doctoral program. The periodic review of the regulations, procedures and methodologies, with the mention of editions and revisions, indicates the institution's concern for maintaining compliance with national legislation and ARACIS requirements. Therefore, the management system and organizational components of UBc provide a functional, transparent and updated framework for the development of the PhD field of Industrial Engineering, which supports the fulfillment of the indicator.

✓ Aspects that constitute best practice examples: -

✓ Recommendations: -

The indicator is: fulfilled.

Standard S.A.1.2. Stakeholder engagement

The HEI proves that it engages the relevant stakeholders in developing methodologies and regulations, as well as implementation procedures.

Indicator I.P.A.1.2.1	The opinions of the faculty and department members, of the subsidiary or extension and of other stakeholders are considered in the process of adopting and revising methodologies, regulations and implementation procedures.
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✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The field of Industrial Engineering was established with the involvement of relevant stakeholders in substantiating academic decisions, in response to the requirements of the economic environment and to the requests coming from students from the master's programs of the [Faculty of Engineering](#). At the level of IOSUD-UBc, the process of elaboration, adoption and revision of academic and administrative methodologies, regulations, codes and procedures is regulated by "[PS 01 System Procedure Documented Information. Create, update, and control](#)" which establishes the stages regarding the elaboration, modification, updating, analysis, verification, endorsement, classification and approval of institutional documents. Within the SSD, the process of adoption and review of information is carried out in a participatory and transparent framework, through the involvement of doctoral supervisors, doctoral students, administrative structures and other stakeholders. Opinions of the members of the University Senate, of the members of the [CSSD](#) and [CSUD](#) are taken into account in the decision-making process. Students are represented in the CSSD, CSUD, [Board of Directors](#) and [University Senate](#), which allows their participation in the adoption and revision of regulations relevant to doctoral activity. The institutional procedures are reviewed and endorsed by the [Monitoring Committee](#) of the university, an aspect mentioned on the cover page of each procedure, which confirms the existence of a formal circuit of verification, consultation and approval.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The data presented indicate the existence of a participatory institutional framework for the adoption and revision of the methodologies, regulations and procedures applicable to doctoral studies. The involvement of the members of the University Senate, CSUD, CSSD, doctoral supervisors and student representatives ensures the integration of the opinions of the main categories of the academic community in the internal regulation process. The representation of doctoral students in the management and consultation structures of the university and of the School of Doctoral Studies contributes to increasing the transparency and relevance of the decisions adopted. Also, the existence of the PS 01 System Procedure provides a formal framework for the elaboration, updating, analysis and approval of documents, which supports the documented and controlled nature of the process. From the discussions held with the employers, it resulted that their opinions are taken into account, periodic meetings being organized. Therefore, IOSUD-UBc demonstrates that the opinions of faculty members,

doctoral structures and other stakeholders are taken into account in the process of adopting and revising internal regulations.

- ✓ Aspects that constitute best practice examples:

[Practice center](#) developed in collaboration with S.C. Barleta SRL Bacău

- ✓ Recommendations: -

The indicator is: fulfilled

Criterion A.2. The material resources and optimisation of the use of the material resources

Standard S.A.2.1. Material resources

The HEI owns adequate movable and immovable assets to enable it to carry out the study programme/domain.

Indicator I.P.A.2.1.1	The HEI legally owns venues for the related education, research and administrative processes, as well as for services for students, doctoral students and trainees, thus providing an enabling environment for living and studying, including for disabled persons. Optimal venues are also provided for activities of the staff. Such venues are adequately equipped.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc provides adequate teaching and research spaces for teaching, scientific and support activities. The research activities are carried out in centers and laboratories equipped with high-performance equipment (over 100 modern equipment). The field of doctoral studies in Industrial Engineering benefits from 12 laboratories, 11 offices and 46 computers for doctoral students, as well as access to the [University Center for Technology Transfer](#) (CTT-UBc), which operates based on its own [regulation](#), and to the [Research Center "Managerial and Technological Engineering"](#), included in the composition [of ICDICTT](#).

The university's [library](#) also operates under its own [regulations](#) and has an appropriate documentary fund, which includes over 500 titles in the field of Industrial Engineering, a significant number of e-books in various fields, as well as access to the [ANELIS PLUS](#) platform. UBc provides access to international databases relevant to each field of study and has resources for the purchase of books and journals, including through platforms such as ScienceDirect, SpringerLink and Thomson Reuters. The current situation regarding the possibilities of accessing documentary resources for the field of Industrial Engineering is presented in [BibliInfo](#), managed by the [Informatics and Digital Communications Service](#). Also, the university provides conditions for carrying out other support and extracurricular activities for students, through social, cultural and sports services, including the existence [of the university canteen](#). UBc also has its own publishing house, [the Alma Mater Publishing House](#), which operates based on its [own regulation](#). The university's research infrastructure and research service offer are publicly presented on the [EERTIS platform](#).

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The access of doctoral students to the Internet in all reading rooms, laboratories, student [dormitories](#) demonstrates the existence of a system of services provided to support doctoral students through student dormitories, canteens, recreation spaces, university library, career counseling and guidance centers, as well as through medical facilities. Also, doctoral students enjoy support for the prevention of university dropout in doctoral studies. The research infrastructure and the offer of research services are publicly presented through a [profile](#) platform. During 27 years of existence, [the Alma Mater Publishing House](#) has printed over 1000 titles - the scientific journals of UBc. Unfortunately, the small number of PhD students in the field of "Industrial Engineering" reduces the efficiency of using high-performance laboratory equipment.

- ✓ Aspects that constitute best practice examples: -

- ✓ Recommendations: -

The indicator is: fulfilled.

Standard S.A.2.2. Management of material resources

The organisational components manage the movable and immovable assets used for the evaluated study programme/domain in an optimal, sustainable manner.

Indicator I.P.A.2.2.1	The movable and immovable assets are properly maintained to ensure optimal conditions for studying, living and research, as well as for work.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc constantly implements projects for the expansion, rehabilitation and modernization of the material base, in order to ensure the necessary conditions for study, research, university life and work activities; example - the project [Developing skills for the professions of the future through digitalization at UVABc](#), funded by PNRR, through which research laboratories were modernized, expanded and consolidated, through the acquisition of digital technology and the introduction of methods teaching-learning and practical training. The Internet connection of the laboratories is provided through [the Computerization and Digital Communications Service](#). The activities of modernization and maintenance of the material base are presented in [the University's Activity Report](#), and the quality of the conditions offered is also reflected in [the Study](#) on the degree of satisfaction of doctoral students with the services offered by UBc.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The information presented highlights UBc's concern for the maintenance and modernization of the material base necessary for teaching and research activities. The investments made through institutional projects, including through the PNRR, contribute to updating the infrastructure and adapting it to the requirements of doctoral training and applied research. The modernization of laboratories, the acquisition of digital technology and the provision of connectivity support the conduct of study, research and practical training activities under appropriate conditions. Institutional reporting and evaluation of doctoral students' satisfaction indicate the existence of mechanisms to monitor the quality of the conditions offered, which supports the fulfillment of the indicator.

- ✓ Aspects that constitute best practice examples:

Proposal to create a joint database of research equipment with other universities. Involvement of companies (Lockheed Martin, Siemens, Aerostar, Barleta) in the endowment and maintenance of laboratories

- ✓ Recommendations: -

The indicator is: fulfilled.

Criterion A.3. Adequate human resources and transparent staff recruiting procedures developed according to the law

Standard S.A.3.1. Human resources

The HEI has the required human resources to organise and deliver the evaluated study programme/domain.

Indicator I.P.A.3.1.1	The human resources of the organisational component are suitable to perform the activities pertaining to the evaluated study programme/domain. The teaching staff has the required qualifications and professional competences to teach the subject matters assigned to them in the job list.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The doctoral field "Industrial Engineering" has human resources quantitatively and qualitatively, corresponding to the legal requirements and needs of the doctoral study program. The legal regulations in force are respected, having an efficient activity in terms of organization, number and qualification of personnel. IOSUD-UBc supports the achievement [of empowerment](#) by the University's teaching staff. The research activity [is evaluated annually](#). On the UBc website are posted the employment opportunities based on [the Regulation on the occupation of teaching and research positions](#), and [recruitment procedures](#). Within the field, there are 6 [doctoral supervisors](#) who meet the qualification criteria established by the legislation in force.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The teaching and research staff hold scientific titles and academic positions, have a nationally and internationally recognized professional and scientific activity, reflected by patents, participation in research projects, grants, etc., and actively contribute to the guidance, evaluation and training of doctoral students. The 6 doctoral supervisors coordinate a total of 7 doctoral students; no supervisor coordinates more than 8 doctoral students. The teaching staff involved in teaching the disciplines of the doctoral program is made up of 4 doctoral supervisors, [3 tenured professors of IOSUD-UBc](#) and [1 doctoral supervisor](#) from the "Al. I. Cuza" University of Iași, with proven expertise in the field of the disciplines taught. The CVs of the teachers who take courses in [the field of "Industrial Engineering"](#) are uploaded to the university's platform. The SSD – [Industrial](#)

[Engineering field](#) aims to continuously strengthen human resources by attracting young teachers with research potential, as well as by supporting the professional development of the existing staff.

- ✓ Aspects that constitute best practice examples: -
 - ✓ Recommendations: -
- The indicator is fulfilled.

Indicator I.P.A.3.1.2	The HEI ensures professional and personal development for its staff.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc ensures the professional and personal development of the staff through activities coordinated by [the Department for the Training of Teaching Staff](#) (D.P.P.D.). The teachers participated in programs such as [the Development of Digital Competences for the Development of Digital Teaching Content](#), carried out within the project [Development of Competences for the Professions of the Future through Digitization at UVAB](#), as well as in the training in [the field of Digital Pedagogy](#), organized through the EduShift project, funded by PNRR. The university also offers postgraduate continuing education programs, such as [Cybersecurity](#), develops institutional projects in partnership with universities in northern Europe and supports teacher mobility through [Erasmus+](#). The teaching and research activity of the staff is evaluated annually, and the teachers are supported in order to obtain [the habilitation certificate](#).

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The data presented show that UBc has functional mechanisms for the professional and personal development of the staff, through continuous training, digitalization, international mobility and support for career development. Participation in digital pedagogy, digital skills and cybersecurity programmes supports the adaptation of teachers to the current demands of education and research. The annual evaluation of the activity and the support for obtaining the habilitation contribute to the consolidation of the academic human resource and to the development of doctoral studies within IOSUD-UBc, supporting the fulfillment of the indicator.

- ✓ Aspects that constitute best practice examples: -
- ✓ Recommendations:

Attracting new PhD supervisors in the field of "Industrial Engineering"

The indicator is: fulfilled.

Standard S.A.3.2. Recruitment procedures Teaching staff recruitment procedures compliant with the provisions of the law.	
Indicator I.P.A.3.2.1	Recruitment procedures comply with the provisions of the law and are established and carried out transparently.

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The recruitment of teaching staff is done according to [the procedures](#) in compliance with the legislation, through [a competition](#) organized for vacant positions, based on [the Competition Methodology](#) for an (in)determined period approved by the Senate. All information regarding the competitions organized in UBc is available on the university's website. The empowerment process is in accordance with the Higher Education Law no. 199/2023 and with the [Regulation on the Organization and conduct of the process of obtaining the habilitation certificate](#), as well as with [the Regulation on the organization and conduct of doctoral degree programs](#) within UBc in compliance with all legal provisions.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The analysis of the actual state shows that UBc complies with the legal provisions regarding the recruitment of teaching and research staff, ensuring that all procedures are transparent and compliant with national and international regulations. Recruitment procedures are also regulated for other [categories of staff](#) and comply with the principles of transparency, competitiveness and non-discrimination. All PhD supervisors in the field of "Industrial Engineering" are scientifically active and have good visibility at national and international level.

- ✓ Aspects that constitute best practice examples: -
- ✓ Recommendations: -
- The indicator is: fulfilled.

Criterion A.4. Digitalisation of institutional processes

Standard S.A.4.1. Digital transformation

The digital transformation process in the organisational component seeks to achieve administrative simplification and improve the quality of the services provided to the members of its own community, as well as to third parties.

Indicator I.P.A.4.1.1	The organisational component uses IT tools in its own procedures, to improve access and provide good quality services for the members of its own community and the indirect beneficiaries of education.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

IOSUD-UBc and SSD use IT tools for managing academic, administrative and quality assurance processes related to doctoral studies. The ICT infrastructure is managed and modernized by the [Informatization and Digital Communications Service](#), in order to support the operation of the applications used by the academic community. The university has the [SmartUMS](#) platform, intended for student management, which allows real-time access to academic information, visualization of the school situation and payment of fees. The platform is correlated with Microsoft 365/Teams, used for online activities, communication, educational resources, and semester teacher assessments by students. In order to support academic integrity, IOSUD-UBc uses similarity verification tools, respectively Plagiarism Detector and Sistemantiplagiat.ro, applied to doctoral theses according to [the IOSUD regulation](#) and [the Regulation on anti-plagiarism verification](#). Also, PhD students and teachers benefit from access to software resources through [Azure Dev Tools for Teaching](#), and library services are supported through [the OPAC database](#). The access of doctoral students to these services is made through the institutional account associated with the student.ub.ro e-mail address.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The integrated use of SmartUMS platforms, Microsoft 365/Teams, anti-plagiarism applications, software resources and the OPAC database highlights the existence of a functional digital framework for supporting doctoral activities. These tools facilitate the access of doctoral students and teachers to information, educational resources, administrative services and communication mechanisms, contributing to increasing the quality of academic services. In relation to the indicator, IOSUD-UBc and SSD use IT tools both for administrative management and for supporting the educational process, evaluating activities and ensuring academic integrity. The modernization of the ICT infrastructure and the use of institutional accounts ensure a controlled and unitary access to services, supporting the fulfillment of the indicator. During the visit to the material base, special equipment was noted, such as the AMEKA humanoid robot, equipped with artificial intelligence and capable of providing verbal answers to various questions, including on advanced topics in the field of industrial engineering, as well as the virtual reality laboratory, equipped with a 16K projection system, useful for training doctoral students through immersive simulation of advanced technological systems.

- ✓ Aspects that constitute best practice examples:

Advanced facilities, such as the AMEKA humanoid robot, based on conversational interaction through artificial intelligence, and the virtual reality laboratory, intended for the immersive simulation of complex technological systems that support the modernization of doctoral training and the familiarization of doctoral students with emerging technologies.

- ✓ Recommendations:

Semi-annual analysis of the impact of the use of artificial intelligence in the training of doctoral students, including some equal opportunities aspects.

The indicator is: fulfilled.

DOMAIN B. Educational efficacy

Criterion B.1. Content and relevance of study programmes

Standard S.B.1.1. Content of study programme/s

The study programme is based on a curriculum designed so that students can acquire the expected learning outcomes.

Indicator I.P.B.1.1.1	The study programme is developed and structured according to the expected learning outcomes and organised based on transferable study credits. It includes all learning, teaching, practical training, research and evaluation experiences, which, together, lead to a higher education qualification.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The doctoral study program in the field of Industrial Engineering lasts 4 years, it is organized on the basis of the [ECTS system](#) - 240 ECTS. The program is structured in two components: the training program based on advanced university studies ([PPA](#)), carried out in the first year and credited with 60 ECTS (30 ECTS for disciplines and 30 ECTS for the elaboration and defense [of the Scientific Research Project](#)), and the individual scientific/applied research program ([PICS/PICA](#)), which includes the elaboration of scientific papers, writing and presentation of the thesis. According to [the Curriculum](#) and [syllabus](#), the PPA includes disciplines oriented towards the acquisition of advanced professional skills, and the acquisition [of learning outcomes](#) relevant to all PhD students in the field of Industrial Engineering, as well as a compulsory discipline of ethics and academic integrity. PhD activities include teaching, learning, research, documentation, experimental activities, internships, writing scientific materials, participation in conferences and symposia, as well as public defense of the doctoral thesis, according to art. 36 of the [Regulation on the organization and conduct of doctoral studies](#) within IOSUD-UBC. PhD students are supported in their professional training through participation in [conferences](#), internships/summer schools, publication of articles and access to financial resources from doctoral grants, research projects, own income or other institutional sources. The completion of the studies is achieved through the public defense of the doctoral thesis, according to [the IOSUD-UBC Regulation](#) and [the procedure PO 91](#).

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The structure of the PhD program in Industrial Engineering is coherent and compatible with the requirements of the indicator, as it integrates advanced training, scientific research, progress assessment and completion of studies through doctoral thesis. The PPA component provides the theoretical and methodological basis, including training in ethics and academic integrity, and the PICS/PICA component contributes to the development of research skills through scientific reports, experimental activities, dissemination and thesis writing. The participation of doctoral students in conferences, the publication of articles and access to training resources support the applicative and scientific character of the program. According to the REI, the proposed curriculum for the period 2026–2030 did not initially include learning outcomes, although they were presented in other documents and properly structured on knowledge, skills, responsibility and autonomy. Also, the mission and objectives of the field were adequately formulated, but they were found in separate documents. The Commission found that the documentation analysed did not show the correspondence between learning outcomes and competences, i.e. between learning outcomes and subjects in the curriculum. In the run-up to the visit, following iterative consultations, the responsible team addressed these inconsistencies. Thus, before the start of the visit, a revised version of the curriculum for the period 2026–2030 was developed, integrating the mission, objectives, learning outcomes and necessary correlations with competences and disciplines, including scientific reports (Additional Annex AS1). At the same time, discipline sheets were produced for the scientific reports, absent from the initial documentation (Additional Annexes AS2 and AS3).

- ✓ Aspects that constitute best practice examples:
- ✓ Recommendations:

Application of the proposed new curriculum (additional annex AS1) starting with doctoral students admitted in 2026

The indicator is: fulfilled

Criterion B.2. Alignment of the curriculum with the qualification

Standard S.B.2.1. Alignment with the qualification level and the intended competences

In the curriculum design and development process, the organisational component seeks to ensure the qualification level, as well as correlation with the envisaged occupations.

Indicator I.P.B.2.1.2	The expected learning outcomes are correlated with the competences required by those occupations, according to the occupational standards and/or the European Skills, Competences and Occupations (ESCO).
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The PhD program in the field of Industrial Engineering is structured by the two main components, PPA and PCS/PCA, which include study [disciplines](#), [research activities](#) and [individual topics](#) associated with each PhD student. These components aim to train the specific and transversal competences targeted by the programme and ensure compatibility with the National Qualifications Framework, the European Qualifications Framework, respectively level 8 CNC/EQF. The programme is developed in correlation with the requirements associated with the relevant occupations in ESCO, in particular those relating to advanced scientific research, innovation, development of new methodologies and integration of modern technologies into industrial processes. The research topics and activities within the SSD contribute to the development of the necessary skills in areas such as automation, robotics, advanced digital solutions and industrial process optimization.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The expected learning outcomes are in line with the competencies required at the level of the doctoral qualification, established by OM 3020/2024, by combining advanced training with individual and applied research. The subjects in the PPA provide the necessary methodological and scientific basis, and the PCS/PCA component allows the development of research, innovation, critical analysis and application of technological solutions skills in complex industrial contexts. The correlation of the programme with level 8 CNC/EQF and relevant occupations in ESCO supports the adequacy of learning outcomes to the professional requirements of advanced research and modern industry. The curriculum and research topics allow the training of specialists capable of transforming engineering and scientific knowledge into practical, interdisciplinary and innovative solutions for the industrial and academic environment. As mentioned in the I.P.B.1.1.1 indicator, the REI did not present a correlation matrix between learning outcomes and competences related to doctoral studies. This aspect was remedied in the run-up to the visit, by developing a revised version of the proposed curriculum for the period 2026–2030, which responds to the current curriculum design requirements, including from the perspective of correlating skills with learning outcomes.

- ✓ Aspects that constitute best practice examples: -

- ✓ Recommendations: -

The indicator is: fulfilled

Criterion B.3. Student-centred learning, teaching and evaluation

Standard S.B.3.1 Principles

The organisational component implements the principles of student-centred learning.

Indicator I.P.B.3.1.1	The organisational component ensures implementation of the student-centred learning in the curriculum and through the teaching strategies used in the learning and teaching activities and experiences.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Within IOSUD-UBc and the SSD, the principles of student-centered learning are applied through a curricular organization that emphasizes the autonomy of the doctoral student, active involvement in research and the development of critical thinking. In the field of Industrial Engineering, these principles are found in the elaboration of the individual research project, in the activity carried out in the research centers, in the use of [modern research methods](#) and in the adaptation of the doctoral path to the theme and needs of each doctoral student. The training process is supported by personalized mentoring, provided by the doctoral supervisor, with the support of the guidance and academic integrity committee, whose members have planned consultations for doctoral students. The teaching strategies used include problem-based learning, project-based learning and collaborative learning, complemented by personalized feedback. At the level of the SSD, its own evaluation methodologies are applied, and annually the [Report on the evaluation of the performance](#)

[of the activities within the SSD is elaborated](#), which also analyzes the involvement of doctoral supervisors and the coordination of the research activity of doctoral students.

- ✓ [Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled](#)

The way of organizing doctoral studies in the field of Industrial Engineering confirms the orientation of the training process towards the individual needs of the doctoral student and towards the development of autonomy in research. Activities specific to the disciplines within the PPA are carried out with a maximum of 30 doctoral students per series/group. The elaboration of the individual project, the activity in research centers and the constant interaction with the doctoral supervisor and the supervisory committee create a favorable framework for active, applicative and personalized learning. The teaching and research strategies used - project-based learning, problem-solving, collaboration and individualized feedback - support the direct involvement of doctoral students in their own training and their responsibility in relation to the research objectives. The annual evaluation of the performance of SSD activities allows the monitoring of the quality of the teaching and research process and provides the basis for identifying deficiencies and formulating improvement measures. These elements support the implementation of the principles of student-centered learning within the doctoral program.

- ✓ [Aspects that constitute best practice examples:](#) -
 - ✓ [Recommendations:](#) -
- The indicator is: fulfilled**

Indicator I.P. B.3.1.2	The organisational component ensures opportunities for students to participate in academic mobility programmes organised in person and/or virtually.
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- ✓ [Presentation of the state of facts, supported by documents and data \(documents preferably included through links in the body of the IER\)](#)

UBc develops international collaborations for teaching and research activities, including for the SSD and the PhD field of Industrial Engineering, coordinated by [the Office of International Relations and Community Programs \(BRIPC\)](#), which manages international partnerships, Erasmus+ programs, logistical and informational support for students and teachers. PhD students can participate in short or long-term study/placement mobility in partner universities, the selection being made transparently, based on [institutional procedures](#) and a [study/placement contract](#). The university has more than 140 Erasmus+ interinstitutional agreements with more than 100 universities, and mobility opportunities are presented on the SSD website, in the [International Relations section](#). Participation is also supported by the granting of mobility grants, including for Erasmus internships. At the level of Industrial Engineering, international collaborations have been capitalized through [co-supervision agreements](#), research internships, international projects and participation in conferences. Data on the activity of doctoral students show that, in the period 2020–2025, doctoral students participated in international conferences and carried out training internships abroad.

- ✓ [Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled](#)

The existence of a structure dedicated to internationalization, namely the BRIPC, as well as the significant number of Erasmus+ agreements and international partnerships demonstrate that IOSUD-UBc provides the necessary framework for the participation of doctoral students in academic mobility. For the field of Industrial Engineering, the participation of PhD students in international conferences, internships abroad and research collaborations confirms the effective capitalization of mobility opportunities. These activities contribute to increasing the visibility of doctoral research, developing academic networks and aligning doctoral training with European and international practices. Between 2020 and 2025, there were 34 trips for internships abroad and participation in conferences generally financed from research projects or from the university's own revenues. At the meeting with the graduates, 2 of the graduates mentioned that they had completed training internships in France and Poland, respectively, which helped them develop their skills in scientific research. Given the small number of students for the field of industrial engineering, these figures can be considered normal.

- ✓ [Aspects that constitute best practice examples:](#)

Membership of the "Vasile Alecsandri" University of Bacău in the alliance of 10 UP University universities

- ✓ [Recommendations:](#) -
- The indicator is: fulfilled**

Standard S.B.3.2. Fairness

The organisational component provides fair opportunities for students.

Indicator I.P.B.3.2.1	The organisational component provides fair opportunities for students, in line with their potential and aspirations, taking into account the diversity of learning styles and abilities
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc ensures fair opportunities for students through an institutional framework oriented towards transparent access to resources, counseling, career guidance and individualized support, according to [the Regulation on the organization and conduct of doctoral studies](#). Students benefit from activities carried out through [the Center for Career Counseling and Guidance \(CCOC\)](#), which offers psychological counseling, support for personal development, self-knowledge and professional guidance. At the institutional level, projects that support inclusion and academic adaptation are implemented, such as [the Vatra Dornei Interdisciplinary and Leisure Educational Center](#), which is also intended for students from disadvantaged socio-economic backgrounds, students with disabilities and minorities, as well as [the IncluziON-UBc](#) project, aimed at counseling and academic adaptation of students with disabilities. Also, the project [Developing skills for the professions of the future through digitalization at UVAB](#) contributes to the modernization of infrastructure, the development of digital laboratories, ensuring access to modern resources and the training of teachers for adaptable teaching. Support for professional integration is strengthened through the [INSERT UBc project - Students-employers-university – Together for the labor market!](#), which includes career counselling activities, information sessions, adapting training to employers' requirements and identifying regional labour market needs. These initiatives aim to ensure equitable access to educational, digital, professional and personal development opportunities.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The data presented as well as those found during the visit highlight the fact that UBc develops institutional mechanisms and projects dedicated to supporting students according to their specific potential, aspirations and needs. Counseling, mentoring, career guidance and psychological support activities contribute to creating a favorable environment for personal and academic development, including for students in vulnerable situations. Projects oriented towards inclusion, digitalization and academic adaptation support equitable access to resources, equipment, modern laboratories and adapted educational activities. Through the integration of digital resources, tailored courses, practical activities, counseling and support for professional insertion, the university responds to the diversity of learning styles and skills. Overall, the initiatives presented demonstrate the concern of the organizational component to ensure fair and differentiated opportunities, correlated with the needs of students and their academic and professional development objectives, which supports the fulfillment of the indicator.

- ✓ Aspects that constitute best practice examples:

PNRR Project "Vatra Dornei Interdisciplinary and Leisure Educational Center"; The target group includes students from disadvantaged socio-economic backgrounds, with disabilities, ethnic minorities, students benefiting from social scholarships.

- ✓ Recommendations: -
The indicator is: fulfilled

Criterion B.4. Accessibility and efficiency of the resources and support services, adequate for learning

Standard S.B.4.1. Access to resources and services

The organisational component provides access to adequate resources and support services, according to the needs of the students.

Indicator I.P.B.4.1.1	The organisational component provides students, including those with special educational needs/disabilities, with access to resources and services designed to support the learning process, adequate for the individual learning needs, the study domain, the study cycle, and the form of organisation of the study programme.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc provides doctoral students with [the Doctoral Student Guide](#), which includes information on IOSUD-UBc, [the School of Doctoral Studies](#), the conduct of the doctoral program, the rights and obligations of doctoral students, the activities of the individual research program, research ethics and the publication of scientific articles. Academic integration is supported by support services offered by [CCOC](#), which provides tutoring, counseling and guidance tailored to students' needs. The learning resources are provided through [the Library of the "Vasile Alecsandri" University of Bacău](#), the specialized collections available in the research laboratories, the papers published by the doctoral supervisors and the members of the steering committees, as well as through access to electronic resources. Some of the volumes published at [Alma Mater Publishing House](#) are available free of charge in electronic format, and membership in [ANELIS PLUS](#) facilitates access to scientific articles, journals and books relevant to the doctoral activity. PhD students benefit from institutional accounts in Microsoft 365, with access to Teams, Outlook, OneDrive, and Office Online, used for communication, collaboration, academic consulting, and remote activities. The [SMARTUMS](#) platform allows secure access to information on the school situation, ECTS credits, timetables, study contracts and curricula. The university also awards [scholarships](#) for supporting academic performance, supporting social or medical situations, and rewarding involvement in university activities. For students with special educational needs/disabilities, UBc provides physical accessibility measures, flexibility in teaching and examination, as well as dedicated support services. [Dormitory 5](#), which includes rooms adapted for people with disabilities, the [UBc Support](#) project, the [IncluziON-UBc](#) project and the [CONSILIA-UBc project](#), oriented towards integration, counseling, academic adaptation and supporting students in vulnerable situations, are relevant.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The meetings held during the visit confirmed the fact that UBc provides doctoral students with an adequate support framework for the doctoral cycle, by combining academic, digital, bibliographical, social and counseling resources. All resources contribute to supporting the learning and research process, in relation to the specific needs of doctoral students. The use of Microsoft 365, Teams and SMARTUMS facilitates access to academic information, communication with doctoral supervisors and steering committees, remote collaboration and management of the doctoral pathway. Access to ANELIS PLUS, library resources and specialist papers supports scientific documentation and research development. The measures aimed at students with disabilities or in vulnerable situations - adapted rooms in the dormitory, counseling, inclusion and academic adaptation projects - indicate the institution's concern for equitable access to resources and services. Overall, the organizational component provides diversified resources and services, adapted to individual learning needs, the field of study and the specifics of doctoral training.

- ✓ Aspects that constitute best practice examples: -
 - ✓ Recommendations: -
- The indicator is: fulfilled**

Criterion B.5. Learning outcomes

Standard S.B.5.1. Definition and evaluation

Learning outcomes are adequately defined and evaluated.

Indicator I.P.B.5.1.1	Learning outcomes are adequately described, and they support understanding of the students' and teachers' expectations regarding the content of the subject matters in the curriculum.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Within the doctoral study program, the [learning outcomes](#) are defined by the activities carried out in the two components of the program: [PPA and PCS/PCA](#). These are reflected in [the discipline sheets](#), in the research themes associated with the individual scientific/applied research program and are correlated with the objectives of the doctoral field, the teaching methods, the evaluation criteria and the requirements for the completion of the doctoral thesis. The expected results are expressed through concrete skills, such as the capacity for critical analysis, the use of qualitative and quantitative research methods, the elaboration and capitalization of research results and the application of the principles of academic ethics. The activities within the PPA and PCS/PCA are carried out in compliance [with the provisions of the UBc Code of Ethics and University Deontology](#) and the [IOSUD-UBc Regulation](#).

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The description of learning outcomes through competencies associated with advanced training and doctoral research activities provides clear benchmarks for both the doctoral student and the teaching staff involved in coordination and evaluation. Their integration into the discipline sheets, the research topic and the evaluation criteria contributes to understanding the expectations regarding the content, the level of performance and the stages of the doctoral path. The correlation of learning outcomes with the objectives of the doctoral field and with the requirements of academic ethics supports the curricular coherence of the program and allows for adequate planning of learning, research and evaluation activities. Although the REI did not highlight the correlations between learning outcomes and competences, respectively between learning outcomes and subjects in the curriculum, it is found that learning outcomes were adequately described and properly structured on knowledge, skills, responsibility and autonomy, in accordance with the current requirements of ARACIS. These correlations were subsequently made in the run-up to the visit. Thus, doctoral students have explicit benchmarks regarding the skills they must develop, and teachers have a common framework for guiding and assessing their progress.

- ✓ Aspects that constitute best practice examples: -
 - ✓ Recommendations: -
- The indicator is: fulfilled**

Indicator I.P.B.5.1.2	Achievement of the learning outcomes is checked in ongoing examinations and study completion exams.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Within IOSUD-UBc, the verification of the achievement [of learning outcomes](#) is carried out both during the doctoral studies and at their completion. Within the PPA, each doctoral student develops a [Scientific/Applied Research Project](#), based on which he/she is evaluated for admission to the Scientific/Applied Research Program (PCS/PCA) and for the preparation [of the Individual Plan of the Scientific/Applied Research Program \(PICS/PICA\)](#). The evaluation along the way includes the periodic presentation of the progress of the research, at least once every 12 months, the elaboration and defense of the three scientific reports provided for in the individual plan, as well as the participation in [scientific activities](#), conferences and specialized publications. The evaluation methods are regulated by the [IOSUD-UBc Regulation](#), and the completion of the studies is achieved through the public defense of the doctoral thesis, according [to the Operational Procedure 91](#) regarding the organization and conduct of the process of defending doctoral theses within the SSD.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The evaluation system applied within IOSUD-UBc allows the progressive and final verification of the learning outcomes, through a coherent sequence of activities: research project, individual plan, periodic progress reports, scientific reports and dissemination activities. These stages support the continuous monitoring of the development of research skills, critical analysis, scientific writing and capitalization of the results obtained. The completion of the studies through the doctoral thesis ensures the integrated verification of the learning outcomes, since the public defense takes place only after the evaluation of the scientific contribution, the verification of similarities, the opinion of the steering and academic integrity committee and the analysis of the reports prepared by the members of the doctoral committee. Through this mechanism, the evaluation along the way and the final evaluation are correlated with the requirements of doctoral training and with the standards of the field of Industrial Engineering.

- ✓ Aspects that constitute best practice examples: -
 - ✓ Recommendations: -
- The indicator is: fulfilled**

Criterion B.7. Procedures and practices regarding the admission competition, the journey, recognition and equivalence of studies, and result certification

Standard S.B.7.1. Admission

The admission procedures and principles ensure access to higher education.

Indicator I.P.B.7.1.1	The organisational component applies the admission procedures.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc applies regulated and transparent procedures regarding admission to doctoral studies, in accordance with the legislation in force and the [Regulations for the organization and conduct of admission](#) approved by the University Senate. Admission to the doctorate is organized annually, in two sessions, and the relevant information regarding the available fields, admission conditions, competition themes, calendar, necessary documents, budgeted/fee-paying places and fees are published on [the page dedicated to doctoral admission](#). For the field of Industrial Engineering, the interview is a mandatory component of the admission process and takes into account criteria such as previous professional performance, interest in scientific research, knowledge of the proposed topic, its originality, quality of answers and skills in an international language. In the period 2020–2025, admission data indicate the filling of available places, respectively 9 budgeted places and one fee-paying candidate. Information on admission is also promoted through the media and through events such as [the Days of the School of Doctoral Studies](#).

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The admission procedure for doctoral studies is clearly regulated, public and applied consistently, ensuring the transparency of the conditions of registration and selection. The publication of information on the timetable, theme, required documents, available places and fees allows candidates equal access to information and supports the predictability of the process. For the field of Industrial Engineering, the inclusion of the interview and the use of selection criteria related to professional performance, research capacity, originality of the topic and language skills allow the appropriate assessment of the candidates' potential for doctoral studies. The data on admission in the analyzed period show the correlation of the number of admitted candidates with the available places, which confirms the application of institutional procedures and supports the fulfillment of the indicator. From the point of view of this indicator, the small number of places allocated for admission to the field of industrial engineering (2 places/year in 2020-2022 and 1 place/year in 2023-2025) is one of the weaknesses of this field.

- ✓ Aspects that constitute best practice examples: -
- ✓ Recommendations:

Taking steps to increase the number of admission places for the field of Industrial Engineering. Posting on the SSD website the English/French versions of essential informative documents regarding admission for attracting foreign doctoral students

The indicator is: fulfilled

Indicator I.P.B.7.1.2	Admission in higher education study programmes complies with the principles of fairness and equal opportunities, and with the establishing of support measures to ensure access of vulnerable groups at social and educational risk, including candidates with special educational needs and/or disabilities.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Admission to university study programs within UBc is carried out in compliance with the principles of equity and equal opportunities, according to national and institutional regulations. The admission procedures are [transparent](#) and accessible to all candidates, without discriminatory criteria, the selection being made exclusively on the basis of academic skills. The University applies [support measures](#) for vulnerable groups, including through places specially allocated to candidates from disadvantaged backgrounds, from the social protection system, Roma candidates and people with disabilities/special educational needs. According to [the Admission Regulations](#), candidates with disabilities can benefit from additional support adapted to individual needs, based on the documents and information submitted to the SSD.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The regulations on admission highlight the existence of a solid, transparent and fair institutional framework, through which UBc ensures compliance with the principles of equal opportunities and non-discrimination. The

admission procedures provide for clear academic criteria, support measures for candidates with disabilities/special educational needs and the possibility of allocating places for candidates from vulnerable groups. However, in the case of the Industrial Engineering doctoral field, the concrete application of measures such as special places for distinct categories of candidates is limited by the very small number of places allocated annually, respectively only one place/year in the last three years. Under these circumstances, while the regulatory framework allows and supports equitable access, the actual impact of differentiated measures for candidates from disadvantaged backgrounds, Roma candidates or persons with disabilities is difficult to quantify at the level of the field assessed. Therefore, the indicator is supported by the existence of a fair and non-discriminatory procedural framework, but the application of specific measures for vulnerable groups must be interpreted in relation to the very small size of the admission capacity to the doctoral field analysed.

✓ Aspects that constitute best practice examples: -

✓ Recommendations: -

The indicator is: fulfilled

Standard S.B.7.2. Academic journey of students

The organisational component carries out actions supporting the students' academic journey.

Indicator I.P.B.7.2.1	The organisational component applies the regulations concerning the students' professional activity.
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✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc applies the regulations on the professional activity of doctoral students through institutional documents such as [the Guide for the doctoral student](#), [the Regulation on the organization and conduct of doctoral study programs](#), the [Regulation of the School of Doctoral Studies](#), [the University Code of Student Rights and Obligations](#), [the Code of Ethics and University Professional Deontology](#) and [the study contract](#). The study contract is signed upon enrollment, and the addenda are concluded at the beginning of each academic year, establishing the rights and obligations of the doctoral student, including the form of funding. The DSS monitors the academic path of doctoral students through the development and implementation of PICS/PICA, verification of the status of research, research reports, access to [scientific databases](#), participation in scientific events and academic mobility, as well as the publication of research results. Students benefit from support through [CCOC](#), through scholarships awarded according to [the Scholarship Awarding Regulations](#), as well as through scholarships/fee exemptions granted by the SSD from its own funds or projects. At the level of the Industrial Engineering field, the dropout rate 4 years after admission is 14% (1 in 7 in the period 2020-2025), and the proportion of budgeted doctoral students who benefited from financial support from sources other than government funding is 54.54%.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The institutional regulations applied at the level of IOSUD-UBc and the SSD provide a clear framework for carrying out the activity of doctoral students, by defining the rights, obligations, rules of academic conduct, the doctoral path and the mechanisms for monitoring progress. The doctoral student's guide centralizes the relevant normative documents and facilitates access to the necessary information on the academic path. Monitoring of progress through PICS/PICA, research reports, scientific activities, mobilities and publication of results confirm the effective application of the regulations. At the same time, the support offered through scholarships, fee exemptions, counseling and access to academic resources contribute to supporting the doctoral path and preventing dropout. The low dropout rate (1/7 → 14%) in the field of Industrial Engineering and the significant share of doctoral students who benefited from financial support indicate the existence of functional mechanisms to support and monitor the professional activity of doctoral students.

✓ Aspects that constitute best practice examples: -

✓ Recommendations: -

The indicator is: fulfilled

Criterion B.8. Internationalisation process

Standard S.B.8.1. Internationalisation

Improving the quality of education and research through internationalisation actions.

Indicator
I.P.B.8.1.1

The organisational component carries out international cooperation actions supporting mobility of the members of its own community and collaboration in academic and research activities.

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc has institutional structures dedicated to international cooperation, namely [the Office of International Relations and Community Programs](#) and [the Erasmus+ Office](#), which operate on the basis of its own [organizational regulations](#) and manage the international mobility of students, teachers and administrative staff. The university has concluded approximately 140 [Erasmus+ interinstitutional agreements](#) with more than 100 universities in the European Union and carries out [Erasmus+ KA107/KA171](#) projects with universities in non-EU countries, which facilitate study, practice, teaching and training mobility. At the same time, as a member of [the University Agency of La Francophonie \(AUF\)](#), UBc participates in international programs dedicated to doctoral training, including by running the "Eugen Ionescu" scholarships and hosting foreign doctoral students. Academic and research cooperation is also supported by international projects with [EEA funding](#) such as [Østfold University College](#), [DEFI UAE](#), [Happy Power \(HaPo\)](#) and [other Erasmus+ KA2 projects](#), oriented towards [skills development](#), research, innovation and inclusion. Also, internationalization is capitalized through co-supervision/co-direction doctorates, the involvement of international reviewers in the evaluation of theses, the invitation of specialists from abroad to hold courses and lectures, as well as by organizing scientific activities for doctoral students. During the analyzed period, 18 lectures were held within the School of Doctoral Studies, and the university's efforts in the field of internationalization were recognized including by [financing the CNFIS-FDI projects](#) – Internationalization of Higher Education and by obtaining [the Logo of Excellence granted by the European Commission](#).

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The existence of structures dedicated to international relations and the significant number of Erasmus+ agreements highlight the fact that UBc provides a functional framework for the mobility of the academic community and the development of international collaborations. The diversity of partnerships, with EU and non-EU universities, facilitates access to study, research, teaching and training mobility for doctoral students, teachers and administrative staff. For the field of Industrial Engineering, international cooperation is capitalized through internships, co-directions, external referents, international projects and lectures held by specialists from abroad. These activities contribute to the internationalization of doctoral training, increasing the visibility of research and connecting doctoral students to international academic practices. The CNFIS-FDI funding for internationalization and the Logo of Excellence granted by the European Commission confirm UBc's concern for strengthening academic and research cooperation.

- ✓ Aspects that constitute best practice examples: -

- ✓ Recommendations: -

The indicator is: fulfilled

Criterion B.9. Scientific research results

Standard S.B.9.1 Scientific research in the education process

Scientific research activities support students in achieving the learning outcomes.

Indicator
I.P.B.9.1.1

Learning based on scientific investigation and research results support and are capitalised upon in achieving the learning outcomes envisaged through the study programme.

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

At the level of IOSUD-UBc and the [School of Doctoral Studies](#), the research activity related to the field of Industrial Engineering is coordinated through specific academic structures, namely the Council of Doctoral Studies and the Council of the School of Doctoral Studies. They take into account the research strategy and research programs in the medium and short term, with objectives, expected results, deadlines and resources to be achieved. The research strategy is integrated into the IOSUD-UBc/SSD Development Management Plan and the UBc Strategic Plan, and the results are reflected in [the documents of the School of Doctoral Studies](#), the [university](#) and the [Faculty of Engineering](#). Doctoral learning is supported by applied

research and scientific investigation activities, developed including in collaboration with the regional socio-economic environment. This collaboration allowed the definition of doctoral topics with practical relevance, oriented towards solving concrete problems, filing patents, developing project proposals and publishing collaborative articles. The activity of doctoral students is documented by Annex III B.1.1. Activity of doctoral students and Annex III B.1.2. Results confirmed doctors from REI. PhD students in the field of Industrial Engineering are encouraged to disseminate their research results by publishing articles in journals, journals or volumes of national and international scientific events, as well as by participating in conferences organized by [the Faculty of Engineering](#), through the [Innovation and Doctoral Research](#) event, or by other higher education institutions in the country and abroad.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The structuring of doctoral training around research, individual project and application themes highlights the integration of scientific inquiry-based learning into the doctoral course. The correlation of the IOSUD-UBC/SSD strategy with the institutional plans and research directions of the Faculty of Engineering supports the coherence of the activities and their relevance for the field of Industrial Engineering. The collaboration with the socio-economic environment allows the capitalization of the research results in doctoral topics with practical applicability, contributing to the development of the skills of analysis, innovation, scientific communication and technology transfer. The publication of articles, participation in conferences, patent submission and involvement in projects confirm the role of research in achieving the learning outcomes targeted by the programme. From the discussions held with the PhD graduates and with the doctoral students, it resulted that the topics addressed in the doctoral theses are of high interest both for the university and for the local industry. Among these, we can mention the research on the milling of aluminium alloys in cryogenic conditions, with particular relevance for Aerostar Bacău, EDM processing in conditions of economic efficiency, processing of magnesium alloys, as well as micro-drawing of thin sheets. It is also noteworthy the existence in the university's laboratories of a liquid nitrogen production facility, which creates favorable premises for the development of multiple research directions in the field of processing in cryogenic conditions.

- ✓ Aspects that constitute best practice examples:

The existence of a liquid nitrogen production plant in the university's laboratories

- ✓ Recommendations: -
The indicator is: fulfilled

Standard S.B.9.2. Scientific research pertaining to the objectives of the study programme
The organisational component carries out scientific research activities aligned with the objectives of the evaluated study programme.

Indicator I.P.B.9.2.1	The results of scientific research are visible at national and international level in that scientific domain and capitalised upon in an adequate manner.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

Scientific research is one of the fundamental missions provided for in the [UBC Charter](#) and an essential component of the field of doctoral studies in Industrial Engineering. The fundamental and applied research topics developed within the field are correlated with the institutional research strategy, with the university's objectives and with [the Research Plan of the Faculty of Engineering](#). According to the data presented in the REI - Annex II.2. 5-year DC activity and Annex II.3. For 5 years, the doctoral supervisors of the SSD – Industrial Engineering field meet the minimum standards of CNATDCU and carry out scientific activities relevant to the field evaluated. The visibility of the research is supported by publications, projects carried out in collaboration with universities in the country and abroad, [theses under joint supervision](#), participation in scientific committees, membership in professional associations and involvement in committees for the defense of doctoral theses. In the period 2020–2025, at the level of the Industrial Engineering field, including in collaboration with the Environmental Engineering field, grants and institutional research/development/human resources projects were carried out. The data from REI-Table III.B.9.2.1 highlight completed and implemented projects, with relevant topics and with the involvement of doctoral students. The results of the research are capitalized through scientific publications, projects, academic collaborations, participation in conferences and knowledge transfer activities to the academic and socio-economic environment.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The analyzed data and the findings during the visit highlight that the field of Industrial Engineering has a visible and relevant research activity, supported by doctoral supervisors who meet the minimum standards of CNATDCU and are involved in publications, projects, academic collaborations, scientific committees and professional associations. These elements confirm the recognition of the research activity at national and international level. The capitalization of the results is achieved through scientific publications, projects, collaborations with partner universities, theses in cotutelle and international academic activities. The existence of completed or ongoing projects, as well as the involvement of doctoral students in them, shows that research is integrated into doctoral training and field development. In relation to the indicator, the research results are visible and appropriately capitalized, contributing to the prestige of the field of Industrial Engineering, to the development of academic collaborations and to the formation of advanced skills of doctoral students. The reported scientific activity supports both the academic relevance of the field and its connection to current research topics and the requirements of the socio-economic environment.

- ✓ Aspects that constitute best practice examples: -
 - ✓ Recommendations: -
- The indicator is: fulfilled

DOMAIN C. Quality management

Criterion C.1. Quality assurance strategies and procedures, including in the field of academic ethics and conduct, which involve students, employers and other stakeholders and are applied in a consistent, transparent manner

Standard S.C.1.1. Application

Adequately implemented strategic directions, actions, and procedures

Indicator I.P.C.1.1.1	The organisational component consistently carries out actions and applies procedures, proving their impact on improving the quality of education at the level of the study programme
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

The quality assurance of education at the level of the doctoral degree program is carried out based on the procedures of the integrated management system of UBc. At the institutional level, [the Evaluation and Quality Assurance Commission operates](#), which coordinates the application of the evaluation and quality assurance procedures, prepares annually [the Report on evaluation and quality assurance in UBc](#) and formulates proposals for improvement. For the monitoring and improvement of curricula/fields of study, OP 12 - Initiation, approval, monitoring, improvement and periodic evaluation of curricula/fields of study and curricula applies. At the level of the Industrial Engineering doctoral field, [the evaluation committee](#) applies the procedures regarding the periodic evaluation and annually prepares the primary/final internal evaluation report. The quality of the academic staff is monitored through OP 05 – Faculty Evaluation Process, which includes peer evaluation, student evaluation and management evaluation. At the SSD level, doctoral supervisors are evaluated according to OP 71 – The process of evaluating the performance of activities within the SSD, based on self-evaluation, evaluation by doctoral students and evaluation by SSD management. Annually, the Director of CSUD/CSSD prepares [the Activity Report](#) on the cycle of doctoral studies, which includes the self-assessment of the activity, the action plan for the next period and the degree of achievement of the assumed objectives. Also, [studies on the degree of satisfaction of doctoral students](#) contribute to the substantiation of decisions on the improvement of academic and administrative services.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The data presented show that UBc consistently applies procedures for evaluating, monitoring and improving the quality of education, both at institutional level and at the level of the SSD and the field of Industrial Engineering. The existence of procedures OP 12, OP 05 and OP 71 provides a coherent framework for the evaluation of the doctoral programme, teachers and doctoral supervisors. The impact of these procedures is reflected in the annual elaboration of internal evaluation reports, activity reports and studies on the satisfaction of doctoral students, documents that allow the identification of points that need improvement and the

establishment of concrete measures. Through these mechanisms, the organizational component supports a culture of quality and a process of continuous improvement at the level of the study program.

✓ Aspects that constitute best practice examples: -

✓ Recommendations: -

The indicator is: fulfilled

Standard S.C.1.2. Stakeholder engagement

The HEI proves that it engages the stakeholders who have relevant activity in applying the procedures.

Indicator I.P.C.1.2.1	The opinions of the members of its own community and of other stakeholders are taken into account in the procedure implementation process.
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✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

At university and ŞSD level, the management structures include representatives of teachers, researchers and students, including doctoral students, who participate in the discussion and approval of regulations and procedures relevant to the doctoral activity. REI mentions that CSUD and CSSD operate on the basis of their own regulations, approved in the Senate, which provide for mixed composition and consultation procedures. Doctoral students are represented in the University Senate and in the structures of the ŞSD, which allows them to directly submit opinions and proposals on the organization of programs, regulations and work procedures. In addition, the university uses [satisfaction questionnaires](#) addressed to students and doctoral students, administered with the support [of the Center for Career Counseling and Guidance](#) and quality structures, to collect [feedback](#) on study conditions, quality of teaching and tutoring activities, support services and academic climate. The involvement of other stakeholders (employers, institutional partners) is achieved through their participation in quality commissions, advisory councils or formal collaborations (contracts, partnership agreements), reflected in the annual quality reports. On the university's website and on the [SSD](#) page, information on management structures, doctoral fields, specific regulations and contact details is published, which facilitates two-way communication with community members and external partners.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The fact that PhD students and teachers are formally represented in the relevant decision-making structures ([Senate](#), CSUD, CSD) indicates the existence of institutionalized channels through which their opinions can influence the way procedures are applied. The use of satisfaction questionnaires and the integration of their results into self-assessment reports and board discussions show that feedback is used in the process of adapting current rules and practices. The participation of employers and other partners in quality commissions or advisory structures supports the idea that the socio-economic environment is involved in [assessing the relevance of programmes](#) and adjusting them to the needs of the labour market. The public information on the university's website and the SSD page, which presents the structures and contact persons, facilitates the access of stakeholders to the decision-making process and to the responsible persons. The views of their representatives of the economic environment are taken into account by organising regular meetings (Additional Annexes AS4 and AS5). Based on these elements, it can be considered that, in the current practice of the field of Industrial Engineering, the opinions of members of the academic community and other stakeholders are effectively taken into account in the implementation of procedures, not only at a formal level.

✓ Aspects that constitute best practice examples: -

✓ Recommendations: -

The indicator is: fulfilled

Criterion C.2. Functionality of education quality assurance structures, including in the field of academic ethics and conduct, according to the law

Standard S.C.2.2. Operation

Quality assurance and academic ethics and conduct organisational structures adequately perform their specific role and functions.

Indicator I.P.C.2.2.2.	The academic ethics commission operates based on the regulation approved by the University Senate, and performs actions that are compliant with the law, independently from any other structure or person in the higher education institution.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc has set up a [University Professional Ethics and Deontology Commission](#), presented on the institution's website in a section dedicated to the ethics commission. In this section you can find information about the role of the commission, composition and contact mode, as well as references to the code and regulations of ethics applicable at the university level. [The Rules of](#) Procedure of the Ethics Commission and [the Code of Ethics](#) are approved by the University Senate and establish the attributions, the procedures for analyzing complaints, the types of deviations from the rules of academic integrity and the sanctioning framework. The Commission analyzes the notifications regarding potential deviations (including suspicions of plagiarism, conflicts of interest, unethical behavior in teaching or research activity) and issues decisions or points of view, which it communicates to the competent management structures for the application of the measures. During the visit, it was noted that the university has an explicit policy of promoting ethics and integrity in research, and at the level [of doctoral studies](#) these principles are supported by specific regulations regarding the writing and evaluation of theses, the verification of originality and the training of doctoral students in the field of academic ethics.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The existence of an ethics commission publicly presented on the website, with the operating framework defined by code and regulation approved by the Senate, confirms the organization according to the legal requirements and methodology of ARACIS. [The working method described in the internal documents \(notification](#), analysis, deliberation and formulation of recommendations or decisions) as well as those found during the visit, demonstrate that this commission effectively intervenes in cases of violation of the rules of academic ethics. The independence of the commission is supported by the fact that it has its own regulation, is directly subordinated to the Senate and acts as a body with the role of analysis and ethical decision-making, distinct from the executive structures of the university. For the doctorate, the role of the committee is essential in ensuring [the integrity of theses](#) and research activities, and the existence of procedures for verifying originality and training in ethics for doctoral students completes the framework provided by the committee. At the level of the Ethics Commission, a bioethics subcommittee operates, through which a bioethics opinion is granted for works that have as their object research on human or animal subjects. Of the 7 members of the Ethics Commission, 2 are students, which ensures their representation in the process of analysis and decision on aspects of university ethics. UBc is among the universities that have adopted a regulation on the ethics of the use of artificial intelligence.

- ✓ Aspects that constitute best practice examples: -

- ✓ Recommendations: -

The indicator is: fulfilled.

Criterion C.3. Procedures for the initiation, monitoring and periodic review of the study programmes and domains and of the performed activities, involving students, employers and other stakeholders

Standard S.C.3.1. Procedures and implementation of procedures

The HEI has procedures for initiating, monitoring, and periodically reviewing the study programmes and domains and the performed activities and applies them systematically.

Indicator I.P.C.3.1.1	The organisational component consistently applies the procedures, and proves their impact on quality assurance.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

At the university level, there are institutional procedures that regulate [the initiation, approval, monitoring and review of programs and fields of study](#) (PO12), including the field of doctoral studies in Industrial Engineering. These procedures establish the steps to be followed for proposing or modifying a program, the responsibilities of the structures involved (department, faculty, SSD, CSUD, Senate) and how to use quality data in the decision-making process. For the field of Industrial Engineering, the internal evaluation

report is prepared annually, which includes the analysis of quality indicators at the field level (number of doctoral students, the situation of their academic career, the scientific activity of the supervisors and doctoral students, the resources involved, etc.) and conclusions on the strengths and aspects that need improvement. The report is discussed and endorsed in the CSSD, in the CSUD and in [the CEAC University](#), and the conclusions are used for decisions related to the organization and development of the field (for example, adaptations in the offer of courses, consolidation of research directions, priorities for endowments or projects). In parallel, the integrated quality management system involves internal audits and periodic management reviews, which include references to how procedures are applied and their effectiveness in maintaining and improving the quality of programs and fields of study. [The results](#) of these verifications can be found in the university's action plans and strategic documents, which also include specific objectives for doctoral studies.

- ✓ [Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled](#)

The existence of clear procedures, at institutional level, for the entire life cycle of programs and fields of study, and their annual application through the internal evaluation report, shows that the field of Industrial Engineering is integrated into a systematic quality assurance mechanism. The fact that [the report](#) is analysed successively in the CSSD, the CSUD and [the CEAC](#) demonstrates that the data and conclusions on quality do not remain at the technical level but are assumed at the management level and used in decision-making. The link between the conclusions of the reports, the internal audit and the institutional action plans indicates that the procedures generate visible effects in the planning and development of the field (e.g. through adjustments to the curricular offer, the conditions for conducting research or the ways of support for doctoral students).

- ✓ [Aspects that constitute best practice examples: -](#)
- ✓ [Recommendations: -](#)

[The indicator is: fulfilled](#)

Indicator	Members of its own community and other stakeholders are involved in the procedure
I.P.C.3.1.2	implementation process.

- ✓ [Presentation of the state of facts, supported by documents and data \(documents preferably included through links in the body of the IER\)](#)

[The initiation](#), [monitoring](#) and review of programs and fields of study, including the [doctoral field of](#) Industrial Engineering, is carried out on the basis of [institutional procedures](#) that provide for the consultation of academic structures and student representatives. The faculty councils, the profile department, [the School of Doctoral Studies](#), CSUD and the University Senate are involved in the process, in which teachers, [researchers and students/doctoral students are represented](#). For the field of Industrial Engineering, [the internal evaluation report](#) and the proposals for measures are discussed in the CSSD, which includes doctoral supervisors and representatives of doctoral students, and later in the CSUD and in the quality structures of the university. The opinion of doctoral students and staff is also collected through satisfaction questionnaires and other feedback tools, the results of which are used in identifying problems and defining improvement actions at program level. The involvement of external stakeholders (employers, partners from the economic and institutional environment) is achieved through formal collaborations and their participation in commissions or advisory structures of the faculty and university, as well as through punctual consultations when analyzing the relevance of study programs to the needs of the labor market. The website of the university and the SSD, through the sections dedicated to doctoral programs and management structures, facilitates communication with these parties and provides a transparent framework for the submission of proposals and observations.

- ✓ [Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled](#)

The participation of teachers, PhD supervisors and doctoral students' representatives in [the structures where internal evaluation reports are discussed](#) and measures are formulated shows that members of the academic community are effectively involved in the implementation of the procedures related to the initiation and revision of the programme. [The systematic collection](#) of feedback through questionnaires and consultations and its integration into CSSD/CSUD reports and decisions support the idea that the views of those directly concerned by the programme have a real role in adjusting procedures and practices. The involvement of employers and other external partners, even if it is mainly done through formal mechanisms (commissions, agreements,

punctual consultations - Additional Annexes AS4 and AS5), contributes to the adaptation of the PhD program to the requirements of the socio-economic environment, which reinforces the relevance and quality of the training offered. The public availability of information about [the structures and contact persons](#), through the website of the university and the SSD, supports the possibility of an open relationship with stakeholders. Overall, there are functional mechanisms through which members of the university community and external partners are involved in the application of the procedures, so that the indicator can be considered fulfilled.

✓ Aspects that constitute best practice examples: -

✓ Recommendations: -

The indicator is: fulfilled

Criterion C.4. Procedures for the periodic evaluation of the quality of the activities of teaching staff, auxiliary teaching staff, and administrative staff

Standard S.C.4.1. Procedures

Applying the methodologies and procedures contributes to improving the quality of the staff's activities.

Indicator	The organisational component analyses the results of the students' biannual evaluation of teachers.
I.P.C.4.1.1	

✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBC has an institutional system for [evaluating teaching activity](#), which also includes the semester evaluation of staff by students, based on [standardized questionnaires](#). The internal procedure for the evaluation of teachers ([OP 05](#)) describes how to apply the questionnaires, the responsibilities of the structures involved and how to centralize the results, which are then made available to the management of the faculties, departments and SSD. For activities involving doctoral students (courses, seminars, methodological activities), their feedback is collected through specific questionnaires or sections of the general questionnaires, which aim at the clarity of teaching, the organization of activities, the quality of teaching resources and the availability of staff for guidance. [The results](#) are analyzed at department, faculty and SSD level, being discussed in the meetings of the management structures and used in the self-evaluation reports. In addition to student evaluation, the university also applies other forms of evaluation (self-evaluation, peer evaluation, management evaluation), and their conclusions are integrated into an [overview](#) of the activity of teachers. For doctoral supervisors there are specific evaluations, described in the internal documents of the SSD, which also take into account the perspective of doctoral students on the quality of supervision.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The semester evaluation system by students is regulated and functional at the university level, and the fact that the results are centralized and discussed in the management structures shows that it is not a simple formality, but a tool used in the analysis of the quality of the teaching activity. The integration of these [results](#) into self-assessment reports and overall assessments of teachers, including doctoral supervisors, shows that student feedback has an effect on decisions on professional development, the distribution of teaching tasks and measures for improvement. For the field of Industrial Engineering, the use of the evaluations made by doctoral students on the activities in which they participate (doctoral courses, seminars, methodological activities) contributes to the adjustment of the contents and working methods, with [a direct impact on the quality of the training process](#).

✓ Aspects that constitute best practice examples: -

✓ Recommendations: -

The indicator is: fulfilled

Criterion C.5. Systematically updated databases on internal quality assurance

Standard S.C.5.1. Databases

The HEI uses databases to support internal quality assurance activities.

Indicator	The organisational component systematically collects and analyses data required for the internal quality assurance process.
I.P.C.5.1.1	

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBC uses information systems and institutional databases to manage [academic activity](#), including [doctoral studies](#), which store information about [students/doctoral students](#), their [academic background](#), school situation, teaching staff and research activities. On the occasion of the visit, it was found the use of a dedicated computer application for the registration of schooling (integrated university management platform), in which the data on enrollment, credit status, exams, interruption periods and completion of studies are recorded and updated. For the field of Industrial Engineering, data are periodically collected regarding the number of doctoral students, the stage of each student's career (year of study, extensions, interruptions), research activities (articles, participation in conferences, projects), the activity [of doctoral supervisors](#), international mobilities and collaborations, as well as the resources involved (laboratories, facilities, relevant research projects). This [information](#) is aggregated in [the internal evaluation reports](#) of the domain and in the summary documents at the SSD level. In addition to academic data, information is collected and analysed [from satisfaction questionnaires](#) addressed to students and doctoral students, from the evaluation of teaching staff and from the activity reports of research structures, which contribute to the overview of the quality of processes and results. The website of the university and the SSD reflects some of this information (offer of programs, structures, relevant results), which shows that the data is not only stored, but also used for information and transparency.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The presence of a section dedicated to SSD, accessible from the university's website, shows that [essential information](#) related to [doctoral studies](#) is communicated publicly and structured. [The admission page](#) provides sufficient details for a candidate to understand the access conditions, the calendar and the requirements, which meets the requirements of transparency regarding access to the study program. Publication of the contact details of their managers in the SSD, of the organizational structure and of relevant [documents](#) (results, [reports](#), [theses](#), [thesis defenses](#), etc.) allows not only information, but also dialogue with stakeholders. From this perspective, it can be appreciated that the information of public interest regarding doctoral studies - including in the field of Industrial Engineering - is made available to the public in an adequate way.

- ✓ Aspects that constitute best practice examples: -

- ✓ Recommendations: -

The indicator is: fulfilled

Criterion C.6. Transparency of information of public interest, including those regarding the study programmes and domains offered, and transparency regarding the related certificates, diplomas and qualifications

Standard S.C.6.1. Transparency

The organisational component ensures transparency of information, as required by the law.

Indicator	The organisational component ensures publication and access to information of public interest regarding the evaluated study programme.
I.P.C.6.1.1	

- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

IOSUD-UBC ensures the publication and access to information of public interest regarding the doctoral study program in Industrial Engineering, in compliance with the principles of transparency and access to information, in accordance with the Law on Higher Education and the legislation on free access to information of public interest. The organizational structure of the [SSD](#) is published on the UBC website in a dedicated section where information on [the structure of the academic year](#), [schedules](#) and [important announcements for students](#) is available. Current communication with PhD students is also carried out through the Teams platform, e-mail and online communication groups. For the doctoral study program in Industrial Engineering, information is published regarding the [SSD regulation](#), [the organization](#) and conduct of doctoral programs, [the content of the study programs](#), [the financing method](#), the framework contract for doctoral studies, [doctoral supervisors](#) and [doctoral students](#), [the results and professional performances](#) of doctoral supervisors, [the Guide on the writing of doctoral theses](#), [the CNATDCU minimum standards](#), [the](#)

[abstracts of doctoral theses](#), [data on public defenses](#), the addresses for [access to completed theses](#), [the annual self-assessment report](#), etc.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The information presented indicates that IOSUD-UBC and SSD ensure an adequate level of transparency regarding the organization and conduct of the Industrial Engineering doctoral program. The publication of regulations, organizational documents, information on doctoral supervisors, training program, financing of studies and completion of theses allows candidates, doctoral students, teachers and other interested parties access to information relevant to the doctoral pathway. Updating the information on the structure of the academic year, schedules, exam sessions and important announcements supports the operative information of doctoral students. Also, the use of the Teams platform, email and other means of communication complements public access to information through direct academic communication mechanisms. By publishing relevant documents and by providing multiple information channels, the organizational component demonstrates concern for transparency, accessibility and effective communication, supporting the fulfillment of the indicator.

- ✓ Aspects that constitute best practice examples: -
 - ✓ Recommendations: -
- The indicator is: fulfilled**

Indicator I.P.C.6.1.2	The organisational component ensures transparent decision-making processes.
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- ✓ Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBC publicly presents its [management structure](#) and the main decision-making bodies (Senate, Board of Directors, Faculty Councils, SSD, CSUD), through the institution's website. In the dedicated sections, the composition of these structures, the main functions and the contact details are indicated, so that members of the academic community and other stakeholders know who bears decision-making responsibility in different areas. The SSD has its own page on the website, where information about the organization of doctoral studies, the responsibilities of the structure and the contact details of the management and secretariat (including telephone and working hours) are presented. The major decisions related to the organization of doctoral studies (regulations, admission methodologies, performance criteria, specific procedures) are approved in the management structures and are published on the website, including [the minutes of the meetings](#). REI shows that, at the internal level, the decision-making processes are documented through minutes of meetings (Senate, CSUD, C\$SD, faculty councils), in which the agenda, the relevant discussions and the decisions adopted, including those concerning the doctoral fields, are recorded. Some of the decisions of general interest are published or communicated to the academic community through [newsletters](#), [reports and studies](#), [regulations](#), etc.

- ✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The publication on the website of the management structure, the managers and the basic documents governing doctoral studies indicate an adequate level of transparency on "who and what decides" in the university and in the SSD. The fact that important decisions are formalized in decisions of the Senate and councils, and that there are minutes documenting debates and decisions, shows that [decision-making processes](#) are structured and traceable internally. Even if not all the minutes are published in full, the existence of a [clear circuit of the decision](#) (proposal, debate in the competent structures, adoption in the Senate/CSUD/CSD, communication) and of the resulting public documents (regulations, methodologies, announcements) contributes to transparency for members of the academic community and for those interested in doctoral studies.

- ✓ Aspects that constitute best practice examples: -
 - ✓ Recommendations: -
- The indicator is: fulfilled**

Criterion C.8. Participation in external evaluation processes, according to the law

Standard S.C.8.1. Compliance with the external evaluation obligation

The HEI undergoes external quality evaluation as required by the law.

Indicator The organisational component carries out the procedures pertaining to the external quality evaluation process, aiming to organise the evaluated study programme as provided by the law.

✓ **I.P.C.8.1.1** Presentation of the state of facts, supported by documents and data (documents preferably included through links in the body of the IER)

UBc and the field of doctoral studies in Industrial Engineering have previously gone through external quality assessment procedures organized by ARACIS, as a result of which the field has obtained the maintenance of accreditation. In the REI it is explicitly mentioned that the field is in the procedure for maintaining accreditation and that the last external evaluation was completed with a [favorable rating](#), based on [the ARACIS Council Decision no. 130 / 16.12.2021](#) in accordance with the current status of the field. The University has internally established responsibilities for the preparation and conduct of external evaluations: drawing up the internal evaluation report (REI), organizing annexes and supporting documents, planning the visit of the team of experts, facilitating meetings with the different categories of actors (management, doctoral supervisors, doctoral students, graduates, external partners). The ŞSD and the quality structures (CEAC university, CEAC Doctoral School) contribute to the collection of data and to the realization of the necessary syntheses for external evaluation. The ARACIS guide documents for the evaluation of doctoral fields and the visit sheet, published on the ARACIS website, are used as benchmarks for structuring the self-evaluation and for preparing the documentation, so that the evaluation procedure is carried out according to official requirements. After the completion of the external evaluation, the recommendations made by the ARACIS commission are analyzed at institutional level, and the response actions are integrated into the action plans and development strategies of the field and the SSD.

✓ Analysis of the state of facts, in relation with the state of facts acknowledged from documents and considering the analysed performance indicator, to justify judgement on the extent to which the indicator was fulfilled

The data from REI and the current status of the field show that the university has already successfully completed [ARACIS external evaluation procedures](#) for the field of Industrial Engineering, which confirms the effective participation in the external quality assurance mechanisms provided by law. The existence of an updated REI, structured according to the ARACIS guide, demonstrates that the institution complies with the requirements regarding self-assessment and documentation of the field for the purpose of the evaluation visit. The involvement of the ŞSD, the university management and the quality structures in the elaboration of the report and in the organization of the visit indicates that the procedures are not only formal, but integrated into the current management of the field. The analysis and incorporation of recommendations from [previous evaluations](#) into action plans and strategic documents is an element that shows that external evaluation is also used as a tool for improvement, not just as an obligation to comply. [The last periodic external evaluation of the](#) field of doctoral studies Industrial Engineering and of IOSUD-UBc took place between October 4–8, 2021, both receiving, according [to the ARACIS Council Decision no. 130/16.12.2021](#), the qualification "maintenance of accreditation". [The external progress assessment report](#) carried out in 2024 shows that all the recommendations made in 2021 have been implemented.

✓ Aspects that constitute best practice examples: -

✓ Recommendations: -

The indicator is: fulfilled

IV. SWOT Analysis

Strengths:		Weaknesses:
✓ Qualified human resource with experience in the field; ✓ Material base and research infrastructure appropriate to the field; ✓ Integration of research into dedicated centers and institutional structures; ✓ Research topics relevant to the field of Industrial Engineering and to the local industry; ✓ Openness to applied research and technology transfer.	INTERNAL FACTORS	✓ Low number of PhD students in the field of Industrial Engineering; ✓ Reduced participation of doctoral students in international mobilities; ✓ Insufficient promotion of research results to the socio-economic environment; ✓ Dependence on limited financial resources for research development.
SWOT analysis		

Opportunities:		Threats:
✓ Development of the fields of advanced manufacturing, digitalization and automation; ✓ Integration of artificial intelligence in Industrial Engineering research; ✓ Development of doctoral topics with direct economic applicability; ✓ Capitalizing on international agreements and Erasmus+ programs; ✓ Development of interdisciplinary collaborations; ✓ Expanding technology transfer activities;	EXTERNAL FACTORS	✓ Decreasing the interest of master's degree graduates in doctoral studies; ✓ Migration of young researchers to larger university centers; ✓ Reorientation of graduates to the private sector or abroad; ✓ Unpredictable funding of doctoral research; ✓ Reduced number of budgeted doctoral places; ✓ Raising academic standards without a proportionate increase in resources;

V. Extent to which the standards and performance indicators are fulfilled, and recommendations

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
DOMAIN A. Institutional capacity			
1.	I.P.A.1.1.1. For delivering the study programme/domain, the HEI has adequate organisational components and an adequate management system, which operate based on methodologies, regulations and procedures that are periodically reviewed as required by law.	Fulfilled	
2.	I.P.A.1.2.1. The opinions of the faculty and department members, of the subsidiary or extension and of other stakeholders are considered in the process of adopting and revising methodologies, regulations and implementation procedures.	Fulfilled	
3.	I.P.A.2.1.1 The HEI legally owns venues for the related education, research and administrative processes, as well as for services for students, doctoral students and trainees, thus providing an enabling environment for living and studying, including for disabled persons. Optimal venues are also provided for activities of the staff. Such venues are adequately equipped.	Fulfilled	
4.	I.P.A.2.2.1. The movable and immovable assets are properly maintained to ensure optimal conditions for studying, living and research, as well as for work.	Fulfilled	
5.	I.P.A.3.1.1. The human resources of the organisational component are suitable to perform the activities pertaining to the evaluated study programme/domain. The teaching staff has the required qualifications and professional competences to teach the subject matters assigned to them in the job list.	Fulfilled	
6.	I.P.A.3.1.2 The HEI ensures professional and personal development for its staff.	Fulfilled	Attracting new PhD supervisors in the field of "Industrial Engineering"
7.	I.P.A.3.2.1 Recruitment procedures comply with the provisions of the law and are established and carried out transparently.	Fulfilled	
8.	I.P.A.4.1.1 The organisational component uses IT tools in its own procedures, to improve access and provide good quality services for the members of its own community and the indirect beneficiaries of education.	Fulfilled	Semi-annual analysis of the impact of the use of artificial intelligence in the training of PhD students, including some equal opportunities issues
DOMAIN B. Educational efficacy			
9.	I.P.B.1.1.1. The study programme is developed and structured according to the expected learning outcomes, and organised based on transferable study credits. It includes all learning, teaching, practical training, research and evaluation experiences, which, together, lead to a higher education qualification.	Fulfilled	Application of the proposed new curriculum (additional annex AS1) starting with doctoral students admitted in 2026
10.	I.P.B.2.1.2 The expected learning outcomes are correlated with the competences required by those occupations, according to the occupational standards and/or the European Skills, Competences and Occupations (ESCO).	Fulfilled	

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
11.	I.P.B.3.1.1 The organisational component ensures implementation of the student-centred learning in the curriculum and through the teaching strategies used in the learning and teaching activities and experiences.	Fulfilled	
12.	I.P.B.3.1.2 The organisational component ensures opportunities for students to participate in academic mobility programmes organised in person and/or virtually.	Fulfilled	
13.	I.P.B.3.2.1 The organisational component provides fair opportunities for students, in line with their potential and aspirations, taking into account the diversity of learning styles and abilities.	Fulfilled	
14.	I.P.B.4.1.1 The organisational component provides students, including those with special educational needs/disabilities, with access to resources and services designed to support the learning process, adequate for the individual learning needs, the study domain, the study cycle, and the form of organisation of the study programme.	Fulfilled	
15.	I.P.B.5.1.1 Learning outcomes are adequately described, and they support understanding of the students' and teachers' expectations regarding the content of the subject matters in the curriculum.	Fulfilled	
16.	I.P.B.5.1.2. Achievement of the learning outcomes is checked in ongoing examinations and study completion exams.	Fulfilled	
17.	I.P.B.7.1.1 The organisational component applies the admission procedures.	Fulfilled	Taking steps to increase the number of admission places for the field of Industrial Engineering. Posting on the SSD website the English/French versions of essential informative documents regarding admission for attracting foreign doctoral students
18.	I.P.B.7.1.2 Admission in higher education study programmes complies with the principles of fairness and equal opportunities, and with the establishing of support measures to ensure access of vulnerable groups at social and educational risk, including candidates with special educational needs and/or disabilities.	Fulfilled	
19.	I.P.B.7.2.1 The organisational component applies the regulations concerning the students' professional activity.	Fulfilled	
20.	I.P.B.8.1.1 The organisational component carries out international cooperation actions supporting mobility of the members of its own community and collaboration in academic and research activities.	Fulfilled	
21.	I.P.B.9.1.1 Learning based on scientific investigation and research results support and are capitalised upon in achieving the learning outcomes envisaged through the study programme.	Fulfilled	
22.	I.P.B.9.2.1 The results of scientific research are visible at national and international level in that scientific domain, and capitalised upon in an adequate manner.	Fulfilled	
DOMAIN C. Quality management			
23.	I.P.C.1.1.1 The organisational component consistently applies the procedures, and proves their impact on quality assurance.	Fulfilled	
24.	I.P.C.1.2.1 The opinions of the members of its own community and of other stakeholders are taken into account in the procedure implementation process.	Fulfilled	
25.	I.P.C.2.2.2. The academic ethics commission operates based on the regulation approved by the University Senate, and performs actions that are compliant with the law, independently from any other structure or person in the higher education institution.	Fulfilled	
26.	I.P.C.3.1.1 The organisational component consistently applies the procedures, and proves their impact on quality assurance.	Fulfilled	
27.	I.P.C.3.1.2 Members of its own community and other stakeholders are involved in the procedure implementation process.	Fulfilled	

No.	Performance Indicator	Extent to which it was fulfilled (F/PF/UF)	Recommendations
28.	I.P.C.4.1.1 The organisational component analyses the results of the students' biannual evaluation of teachers.	Fulfilled	
29.	I.P.C.5.1.1 The organisational component systematically collects and analyses data required for the internal quality assurance process.	Fulfilled	
30.	I.P.C.6.1.1 The organisational component ensures publication and access to information of public interest regarding the evaluated study programme.	Fulfilled	
31.	I.P.C.6.1.2 The organisational component ensures transparent decision-making processes.	Fulfilled	
32.	I.P.C.8.1.1 The organisational component carries out the procedures pertaining to the external quality evaluation process, aiming to organise the evaluated study programme as provided by the law.	Fulfilled	

Summary Table of Performance Indicators – Degree of Fulfillment

Evaluation Domain	Number of Performance Indicators		
	Fulfilled	Partially fulfilled	Unfulfilled
Domain A. Institutional capacity	8	0	0
Domain B. Educational efficacy	14	0	0
Domain C. Quality management	10	0	0
Total	32	0	0

VI. Conclusions

1. The field of doctoral studies Industrial Engineering operates in a clearly regulated, transparent and updated institutional framework, being supported by managerial, administrative and quality assurance structures appropriate to the organization of doctoral studies.
2. The human resource involved in the field is adequate in terms of academic and scientific qualification, the doctoral supervisors having recognized research activity, involvement in projects, publications and relevant experience for the training of doctoral students.
3. The material base and research infrastructure are adequate and in the process of modernization, the field benefiting from laboratories, high-performance equipment, digital resources, access to scientific databases and facilities that support the conduct of doctoral research in appropriate conditions.
4. The doctoral program is structured coherently, based on advanced training and individual scientific research, and the initial inconsistencies regarding the integration of learning outcomes and their correlation with disciplines and competences were remedied by developing the revised curriculum for the period 2026–2030, in the period prior to the visit.
5. All 32 performance indicators evaluated are met, with no partially met or unmet indicators, which underpins the decision to maintain the accreditation for the field of doctoral studies in Industrial Engineering. Five recommendations were made for four indicators.
6. The field of doctoral studies in Industrial Engineering also highlights a number of aspects of good practice, such as collaboration with the economic environment in the development of training and research facilities, the involvement of important companies in the endowment and maintenance of laboratories, the use of advanced technologies based on artificial intelligence and virtual reality, the participation of UBc in international university alliances and the development of projects oriented towards inclusion and equitable access, elements that confirm the institution's concern for the modernization, relevance and sustainability of doctoral training.

Propose and substantiate a decision.

Following the completion of the maintaining accreditation procedure, the decision of the evaluation panel shall be one of the following:

maintaining accreditation (MAC);

VII. Appendices

- DSUD Industrial Engineering Assessment Calendar 17-18 June 2026
- Minutes of meetings – 12 minutes.
- Additional annexes on the basis of documents requested in the period prior to the visit and during the visit: **AS1.** Proposed Education Plan 2026-2030; **AS2.** FD_ Scientific Research Report 1_AN II_Sem. 3-4_AF; **AS3.** FD_ Scientific research report 2_3 AN II_IV_AF; **AS4.** Example 1_PV; **AS5.** Example 2_PV