

The External Evaluation Report of an Institution Organizing Doctoral Study Programs (IOSUD)

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I. Introduction¹



In this chapter, the following shall be summarized:

The "Ferdinand I" Military Technical Academy is under the Minister of National Defense. It is a public higher education institution and an integral part of the national education system. The Academy trains experts in logistics, technical-engineering service, and civilian personnel selected for the needs in the field of defense structures or various users from the country and abroad, following the law. The Military

¹ Each time when applicable the information shall be presented genderwise



Technical Academy "Ferdinand I" performs higher education activities, organized through undergraduate, master's and doctoral studies in accredited fields, as well as other forms of training, advanced training and advanced training.

The training of engineers for the needs of the army dates back to 1924-1925. Law no. 72 of March 11, 1932, the Military Technical Corps was established, as a body with special attributions in the Romanian army. The Military Technical Corps created a higher institution for technical education in which engineers were specialized in solving problems specific to the army and certified in various weapons. The ensuing process, the rapid technicalization of the army, necessarily imposed the establishment of a military higher education institution that would, in terms of quality and quantity, meet the need for engineering officers for the Romanian army.

The Military Technical Academy "Ferdinand I" was founded on September 15, 1949, by Decree no. 371 of 14.09.1949, whose goal is "training of engineering officers, training that corresponds to the technical specifics of various weapons, necessary for the assignment of commands, units, formations and specialized military institutions." By order of the General Staff in 1952, the name of the institution was changed to the Military Technical Academy. In August 1953, after passing the state exam, he graduated the first class of military engineers in the Romanian army. 69 graduates received the title of military engineer in specializations in mechanical and electrical profiles.

The studies at the Military Technical Academy initially lasted 4 years, from 1953 5 years, and 1957 5 and a half years. At the end of the studies, after passing the state exam, the graduates were awarded diplomas of military engineers, which gave the holder the same rights as the engineers who were trained for civil polytechnic education. Between 1960 and 1990, military-technical higher education took place at the following faculties: Technical Faculty of Weapons; Faculty of Tanks and Automobiles; Faculty of Electronics and Faculty of Civil Engineering. The Military Technical Academy "Ferdinand I" is accredited by the decisions of the Romanian government no. 225/1995, 294/1997, 442/1998, 535/1999, 696/2000 and 410/2002, for the training of engineers for specializations required for the Ministry of National Defense, as well as other users in the country (Ministry of Interior, Special Telecommunication Service, Romanian Intelligence Service, Protection and Guard Service, Foreign Intelligence Service) and abroad.

It also organizes and conducts postgraduate education for the training and education of engineers and civil engineers in the Ministry of National Defense, in the structures of the national defense system, as well as for other users in the country and abroad, including doctoral training. The results of scientific research work were presented and received with great interest at prestigious scientific events with international participation, organized in the country or other countries, as well as at international exhibitions.

In 1992, the Computerized Publishing House of the Military Technical Academy came into operation, which allowed the creation of textbooks, lessons, applications, monographs, etc., which improved the fund of military and specialized literature necessary in education and the instructive-educational process. So far, over 6,500 graduates - military engineers and sub-engineers - have come out at the gates of the Military Technical Academy - who, due to their scientific, technical and organizational training, have honored the places and positions in which they were appointed.

The "Ferdinand I" Military Technical Academy has permanently maintained connections with graduates, as well as with retired teaching staff, in various ways such as communication sessions and scientific symposia (inside and outside the academy); carrying out teaching activities as associate staff or consultant; participation in applications and other training categories; collaborations in contract-based



scientific research; practical activities and documentation visits; meetings on the occasion of postgraduate courses; anniversaries etc.

In 1999, the Military Technical Academy "Ferdinand I" celebrated 50 years since its establishment, a period in which military polytechnic education has had an upward evolution, with remarkable

On November 1, 2004, the Military Technical Academy "Ferdinand I" celebrated 55 years since the establishment of the institution, which was attended by military and civilian personalities.

In 2018, "Ferdinand I" Military Technical Academy was again reorganized, and since the 1st of October 2018, it has been functioning within the following structure: 4 faculties (Faculty of Integrated Armament Systems, Military Engineering and Mechatronics; Faculty of Aircraft and Military Vehicles; Faculty of Information Systems and Cyber Security; Faculty of Communications and Electronic Systems for Defense and Security), and 1 independent department (Department of Foreign Languages, Military Science and Management).

By Government Decision no. 153 of March 19, 2019, Military Technical Academy received the official name of "Ferdinand I" Military Technical Academy (ATM FI) (Annex no. I-05). Currently, "Ferdinand I" Military Technical Academy ensures, according to the law, high-performance education achieved by a complex research activity based on the means provided by the modern information society through all categories of study programs (Bachelor's, Master's and doctoral), as well as through postgraduate, specialist and further training courses, and other courses in its field of competence. "Ferdinand I" Military Technical Academy trains engineer officers enrolled in study programs accredited by ARACIS and approved by Romanian Government Decisions: G.D. 385/2021 (Annex no. I-06) and 403/2021 (Annex no. I-07).

The main missions of ATM are:

- Bachelor study programs for engineer and logistics officers and other specialists needed for defense;
- Master's programs for military and civilian specialists;
- Doctoral studies in "Engineering Sciences" for military and civilian specialists;
- Postgraduate and all life learning in terms of adding courses for improving skills of military and civilian specialists;
- According to standards in the domain of defense carry out basic and applied academic and scientific research activities for awarded by competition;
- They collaborate with all educational institutions in the county and abroad;
- ATM promotes EU dimension of higher education participating in EE programs with military and civilian universities, according to the specificities and legal regulations in force;
- Adapt the higher education to NATO terminology, standards and procedures within European security systems.

"Ferdinand I" Military Technical Academy has designed its strategic objectives for the period 2020-2024 following the priorities established for the development of the European Higher Education Area. Thus, to increase the quality of university education, the rector of the academy establishes, through the operational plans elaborated for each academic year

<https://mta.ro/wp-content/uploads/2021/02/PLAN-OPER-ATM-CERCETARE-2020-R-pentru-site-min.pdf>).



IOSUD – FIMTA promotes interdisciplinarity in doctoral studies. Doctoral studies in “Ferdinand I” Military Technical Academy are organized into 2 forms of education: full-time and part-time, with funding from the budget and against payment of a tuition fee.

Postgraduate courses organized within “Ferdinand I” Military Technical Academy are evidence of the strategy to ensure training programs and continuous professional development for specialists in the system of defense, public order and national security, as well as for other specialists.

“Ferdinand I” Military Technical Academy organizes university scientific research activities, which materialize in applied research works based on contracts, fundamental and applied scientific research works, technological development, testing-evaluation, elaboration and evaluation of standards, technical studies to substantiate new constructive solutions of armament and combat technique, experiments and modernizations for military equipment products, making layouts and laboratory models for improving the education and scientific research infrastructure in the academy, papers, articles and scientific communications, elaboration of textbooks, courses and collections of problems as bibliographic support for the courses taught in the institution.

The scientific research activity carried out by the teaching and research staff is capitalized by: scientific papers published in the country and abroad; communications presented at national and international scientific events; expertise and consultancy activities; patents.

In order to train a new generation of researchers, the mission of the Doctoral School is to ensure the improvement and extension of training, attested by the diploma obtained at the end of master’s studies, through teaching, seminar, evaluation, scientific research, capitalization of scientific research, technological development, design and artistic creation, according to the specifics of the doctoral study domain.

The resources and services provided to the students of “Ferdinand I” Military Technical Academy are adequate and relevant for facilitating learning and ensuring qualitative student life.

The library of Military Technical Academy has an area of approximately 417.90 sq. m and can respond to all requests from readers, regardless of whether they are students or staff; the book fund is managed by staff with higher education, and specialized media which provide assistance and bibliographic information for readers.

The doctoral study programs are organized and carried out within IOSUD-FIMTA, through the Doctoral School in “Defence and Security Systems Engineering (SD)” (<https://mta.ro/scoala-doctorala>). Within the Doctoral School in “Defence and Security Systems Engineering” from “Ferdinand I” Military Technical Academy, there are 7 accredited doctoral study domains.

The doctoral school provides doctoral students with the research infrastructure and the logistic resources for the development of the research activity within the doctoral study program.

Within the scientific research program, the doctoral student has the following obligations correlated with the type of doctoral study program:

- to elaborate at least 3 scientific papers in the thematic field of the doctoral thesis, in which it synthesizes the intermediate scientific results they obtained and will capitalize in the doctoral thesis;
- to publish at least 3 articles (1 ISI and 2 BDI, according to the contract) from the thematic field of the doctoral thesis in journals/conferences indexed in international databases;
- the expenses occasioned by the publication of the results of the scientific research during the doctoral studies, to fulfil the requirements from point b), may be covered by the MTA,



provided that the doctoral student and/or the doctoral supervisor becomes involved in some research projects.

The number of supervisors and students for each domain:

- The Electronic Engineering, Telecommunications and Information Technology doctoral study domain, with 5 doctoral supervisors and 29 doctoral students;
- Computer Science and Information Technology doctoral study domain, with 1 doctoral supervisor and 13 doctoral students;
- Electrical Engineering doctoral study domain, with 3 doctoral supervisors and 14 doctoral students:
- Mechanical Engineering doctoral study domain, with 9 doctoral supervisors and 45 doctoral students;
- Industrial Engineering doctoral study domain, with 1 doctoral supervisor and 2 doctoral students:
- Aerospace Engineering doctoral study domain, with 1 doctoral supervisor.

During 2015-2020, 76 doctoral theses were defended

- the context in which this external evaluation report was drafted (**the type of evaluation, the period of the evaluation visit, the composition of the Experts Committee, etc.**);
- details about the institution organizing the doctoral studies (number of Doctoral Schools, number of students, institutional context, short history, etc.);
- During a period from 13.10.2021 to 15.10.2021, we have an evaluation period. During this period we have many online meetings with all subjects in
- *doctoral study domains at the **Military Technical Academy Ferdinand I of Bucharest.***
- We had activities every day with different groups of subjects from a University involved in the evaluation.
- 13.10.2021 had full day activities:
- From 8:15-9:00 had an online preliminary meeting for the preparation and harmonization of evaluation steps, in hybrid mode, of doctoral study domains and IOSUD the context in which this external evaluation report was drafted with all evaluation panel members.
- From 9:15-10:00 had an online meeting with representatives of the institution and of the Council for Academic Doctoral Studies (CSUD) with all members of the evaluation team representatives of the University management,
- From 10:10-11:00 had an online meeting with the contact person for the doctoral study domain under review and the team responsible for the internal evaluation report, with all members of the doctoral study domain contact person and the team responsible for the internal evaluation report
- From 11:10-12:00 had an online meeting with the academic staff of the doctoral study domain under review with evaluation panel members for the doctoral study domain and academic staff of the doctoral study domain.
- From 12:10-13:00 had an online meeting with IOSUD evaluation panel members with the director of CSUD/ director of the doctoral school and the team responsible for the internal evaluation report, members of IOSUD evaluation panel, the director of CSUD and the director of the doctoral school, members of the team responsible for the internal evaluation report.
- From 13:10-14:00 had an online meeting of IOSUD evaluation panel members with the academic staff of the doctoral school, members of the IOSUD evaluation panel and academic staff of the doctoral school



- From 18:30-19:30 had an online technical meeting to identify specific issues that need to be clarified during the on-site visit (if the case) with all members of the evaluation team
- 14.10.2021 had full day activities:
- Face-to-face working meetings, visit of the educational and research infrastructure, The program will include meetings with: university management, representatives of the CSUD Council and the Doctoral School Council, representatives of the Ethics Commission, university representatives involved in internal quality assurance of doctoral studies, representatives of the research centers in the doctoral domains under review.
- 14.10.2021 had full day activities:
- From 8:00-8:40 had an online technical meeting to identify specific issues that need to be clarified, if necessary, during the on-site visit with all members of the evaluation team.
- From 8:50-9:50 had an online meeting with students of the doctoral study domain under review with evaluation panel members for the doctoral study domain and students of the doctoral study domain.
- From 9:50-10:50 had an online meeting of IOSUD evaluation panel members with students of the doctoral school with members of IOSUD evaluation panel and students of the doctoral school
- From 11:00-12:00 had an online meeting with graduates and employers of the doctoral study domain under review, evaluation panel members for the doctoral study domain and graduates and employers of the doctoral study domain.
- From 12:10-13:10 had an online meeting of IOSUD evaluation panel members with graduates and employers, members of the IOSUD evaluation panel, and graduates and employers.
- From 13:10-15:40 had completion of the evaluation documents with evaluation panels for IOSUD and doctoral domains and Independent and/ or collaborative work with other panel members.
- From 15:50-16:30 had an online meeting for conclusions with all members of the evaluation team.
- From 16:30-17:30 had a meeting with representatives of the institution under review to discuss the conclusions of the evaluation process and the main recommendations with all members of the evaluation team and university representatives

II. Methods used

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

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

- a planning tools.
- a tool for program management.
- the basis for M&E in a project or program.
- an accountability mechanism.
- a succinct summary of a piece of work.



- a ‘window’ into the work of an organization or complex program.
- a linear theory of change; or
- a mechanism for seeking funding.

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

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

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

III. Analysis of ARACIS’s performance indicators²

Domain A. INSTITUTIONAL CAPACITY

- *general description of the domain analysis.*

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

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

- *general description of the standard analysis.*

² Each time when applicable the information shall be presented genderwise

Performance Indicator A.1.1.1. *The existence of specific regulations and their application at the level of the IOSUD, respectively at the Doctoral School(s):*

(a) *the internal regulations of the administrative structures (the institutional regulations for the organization and conduct of doctoral studies programs, the regulation(s) of Doctoral School(s);*

(b) *the Methodology for conducting elections at the level of the Council of University Doctoral Studies (CSUD), respectively at Doctoral School(s) including elections by the students of their representatives in CSUD/Council of the Doctoral School (CSD) and the evidence of their conduct;*

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

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

(e) *functional management structures CSUD/Council of the Doctoral School with evidence of the regularity of meetings;*

(f) *the contract for doctoral studies;*

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

- The regulation includes the transposition of the provisions of the existing national legislation and the Ministry of National Defence regarding the organization and development of doctoral studies based on the scope of the "Ferdinand I" Military Technical Academy. The regulation for the organization and development of doctoral studies was revised during the meeting of the Council for Doctoral University Studies, on 08.05.2017, and approved in the meeting of the University Senate, on 23.05.2017.
- The constitution /completion of the university management structures and the establishment of the persons to be appointed in university management positions is achieved through the election procedure, respecting the principle of universal, direct and secret voting, by participating in the voting the persons with voting rights to be registered. on voting lists. The doctoral school council consists of 4 members, of which 3 doctoral supervisors and 1 doctoral student (1/4 = 25%). The composition of the Doctoral School Council consists of the director and 4 members and is visible at <https://mta.ro/conducere-scoala-doctorala>.
- The admission competition contains, in addition to the test specific to the field of study, a test of linguistic competence for an international language. The admission competition to doctoral studies is carried out on doctoral fields in front of several admission commissions composed of at least 3 members, one of which is the president of the commission.
- Empowerment is the certification of the quality of a person to conduct doctoral theses. The habilitation thesis reveals the didactic and research capacities and performances. The thesis presents in a documented way the professional achievements obtained after conferring the title of doctor in science, which proves the originality and relevance of academic, scientific and professional contributions and which anticipates an independent development of the future research and/or university career. The provisions of the procedure apply to Romanian citizens, citizens of member states of the European Union, the European Economic Area, the Swiss Confederation, as well as citizens of third countries.
- At the IOSUD level, the governing and functional coordination forums are the University Senate and the CSUD. The frequency of convening meetings is 1-2 per month and whenever the situation requires it. At the level of the doctoral school, functional

management is provided by the Council of the doctoral school. The doctoral school council usually meets once a month and when necessary in situations that require it.

- Following the admission to doctoral studies, each admitted doctoral student, regardless of the form of education, concludes a contract of doctoral studies, signed by the doctoral student, the doctoral supervisor, the financial accounting director, the head of the legal department and the rector of the academy. The contract stipulates the rights and obligations of doctoral students, doctoral supervisors and IOSUD, through the doctoral school.
- The individual plan of the scientific research program is approved by the director of the Doctoral School. The commissions for supporting the Scientific Research Reports are approved by the director of the Doctoral School. The committee includes the doctoral supervisor and the members of the supervisory committee. The support of the Research Reports is made in public meetings, the meetings being announced, at least 48 hours before the presentation, at the notice board of the Doctoral School.

Recommendations:

The indicator is fulfilled.

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

- The regulations of the doctoral school are approved by the universal, direct, secret and equal vote of the absolute majority of the doctoral supervisors. The regulations of the doctoral school are approved by the CSUD and the Senate. The doctoral school regulations establish mandatory criteria, procedures and standards regarding the following aspects:
 - The acceptance of new doctoral supervisor members, as well as regulations regarding how a doctoral supervisor can be revoked as a member of the doctoral school; - art. 18, para. (4), para (5).
 - The regulation of the Doctoral School establishes obligatory criteria, procedures and standards regarding the following aspects:
 - acceptance of new leading members of the doctorate.
 - the mechanisms through which the decisions are taken regarding the opportunity, the structure and the content of the training program based on advanced university studies
 - the procedures for changing the doctoral supervisor of a certain doctoral student
 - the conditions under which the doctoral program may be interrupted
 - ways to prevent fraud in scientific research, including plagiarism
 - ensuring access to research resources
 - the attendance obligations of the doctoral students
- The regulations of the doctoral school are approved by the universal, direct, secret and equal vote of the absolute majority of the doctoral supervisors. The regulations of the doctoral school are approved by the CSUD and the Senate. The doctoral school regulations establish mandatory criteria, procedures and standards regarding the following aspects:



- The acceptance of new doctoral supervisor members, as well as regulations regarding how a doctoral supervisor can be revoked as a member of the doctoral school; - art. 18, para. (4), para (5).

Recommendations:

The indicator is fulfilled.

Performance IndicatorA.1.1.3***³. *Doctoral schools included in IOSUD are organized as disciplinary or interdisciplinary disciplines/thematic, according to Article 158, paragraph (7) of the Law of National Education No. 1/2011 with subsequent amendments and additions.*

- “Ferdinand I” Military Technical Academy organizes and carries out doctoral studies in the fundamental field “Engineering Sciences”. The Senate of the “Ferdinand I” Military Technical Academy, on 05.10.2016, decided the merger of the doctoral school “Mechanical and aerospace systems for defense and security, civil and industrial engineering” and of the doctoral school “Electronic, computer and communication systems for defense and security” in a single doctoral school under the name of “ Defense and security systems engineering ”.
- The doctorate from the academy can also be organized in international co-supervision. The co-supervision agreement includes the requirements for the organization and development of the doctorate in each of the two I.O.S.U.D.s, following the role that each party assumes within the co-supervision and with the specific legislation of each country. The agreement provides for the mutual recognition of the scientific title of doctor by the competent authorities of the two countries, based on their competencies and following the legal provisions of each country. The agreement between the parties regarding the co-supervised doctorate may be concluded before the development of the advanced university training program or before the development of the scientific research program.

Recommendations:

The indicator is fulfilled.

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

- *general description of the standard analysis.*

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

- In the FIMTA, the record of doctoral students is made both in writing in the matriculation register for doctoral university education and in electronic format on the platform of the Integrated Educational Register of the Ministry of Education, in the Unique Matriculation Register and electronic format in the excel database level of the Doctoral Coordination Department. The database contains the identification data of the doctoral students, the

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



contact data, the doctoral field, the name and surname of the doctoral supervisor, the year of registration, the stage of preparation (exams and reports taken) and the situation of payment of fees.

Recommendations:

- Translate all documents on the website to English.

The indicator is fulfilled.

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

- In FIMTA the theses are verified with the specialized software existing on the platform <https://www.sistemantiplagiat.ro/>
- Sistemantiplagiat.ro is a computer program for comparing documents in text format. A similarity ratio is a tool based on which an assessment can be made regarding the originality and quality of the text. Two similarity coefficients determine the percentage value of the analyzed text that is identical to other documents. The similarity coefficient 1 shall not exceed 10% and the similarity coefficient 2 shall not exceed 5%

Recommendations:

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

The indicator is fulfilled.

Criterion A.2. Research infrastructure

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

- *general description of the standard analysis.*

Performance Indicator A.2.1.1. *The IOSUD/the doctoral school(s) present proof of possessing or having rented adequate spaces for research activity specific to doctoral studies (laboratories, experimental fields, research stations etc.)*

- The doctoral school has the necessary research infrastructure to support the development of activities specific to doctoral studies. The "Ferdinand I" Military Technical Academy has laboratories, specialized rooms, centers of excellence that are equipped with the equipment and technical means necessary to carry out the educational process for undergraduate, masters and doctoral studies.
- Research centers are:
 - CENTER OF EXCELLENCE IN ROBOTICS AND AUTONOMOUS SYSTEMS (CERAS)
 - CENTER OF EXCELLENCE IN INTEGRATED ARMS AND ENGINEERING SYSTEMS (CESIAG)
 - ENERGY AND BALLISTICS AND CBRN DEFENSE LABORATORY (LEBS-CBRN) LABORATORY
 - LABORATORY OF CONSTRUCTION MATERIALS AND SUBSTATIC,
 - DYNAMIC AND SHOCK ELEMENTS LOADS



- The educational and research spaces are located in buildings that are part of the Ministry of National Defense patrimony, assigned for this purpose to the “Ferdinand I” Military Technical Academy.
- The material base of the “Ferdinand I” Military Technical Academy fulfills the requirements of the educational process for all university study programs, as well as of the university scientific research at the level of the exigencies of the university technical education.
- Ferdinand I” Military Technical Academy has laboratories, specialized rooms, centers of excellence that are equipped with equipment and technical means necessary for the educational process for undergraduate, master's and doctoral studies
- Also, doctoral students have access to the research and testing laboratories of the Research Agency for Military Technology and Technologies (ACTTM) based on the agreement concluded with this institution.
- Students have online access to international databases and electronic scientific resources (databases/platforms of full-text scientific journals and bibliographic and bibliometric databases)

Recommendations:

The indicator is fulfilled.

Performance Indicator A.2.1.2. *The IOSUD/doctoral school(s) has/have collaboration agreements with higher education institutions, research institutes, research networks for joint partnerships and have access for using various research infrastructures; the offer for research services is presented publicly using a dedicated platform.*

- FIMTA can provide financial support to doctoral students to carry out research internships in the country or abroad by concluding agreements or institutional partnerships, doctoral research in co-supervision, exchanges of doctoral students and professors with internationally recognized universities, participation in international consortia aimed at including doctoral research topics in international scientific projects.
- The list of theses carried out by FIMTA in collaboration with other universities in the country or abroad is presented at <https://mta.ro/wp-content/uploads/2019/08/Teze-in-cotutela.pdf>.
- There are 14 Universities on the list of collaboration institutions.

Recommendations:

The indicator is fulfilled.

Performance Indicator A.2.1.3. *The IOSUD/doctoral school(s) proves that it is/are concerned with the permanent renewal of the research infrastructure to provide doctoral students access to updated research resources, by applying to various funding competitions and using their own university resources for acquiring new research infrastructure.*

- The doctoral school (s) has/ have collaboration agreements concluded with higher education institutions, research institutes, research networks for the exploitation in partnership of various research infrastructures and publicly presents its offer of research services through a platform profile.
- The list of theses carried out by FIMTA in collaboration with other universities in the country or abroad:

- Polytechnic University of Bucharest
 - Grenoble Polytechnic Institute France
 - “Carol Davila” University of Medicine and Pharmacy
 - Royal Military Academy Bruxelles
 - University of West Brittany
 - The National Engineering School of Brest
 - Grenoble Alpes University
- The academy has a modern library that provides access to the shelf and the possibility of computerized information through the online electronic catalog. The library has a rich book fund, corresponding to the documentation needs for all doctoral fields in IOSUD-FIMTA and the study programs carried out. This book collection is constantly updated and enriched and is complemented by subscriptions to scientific publications, doctoral theses and special collections.
- A modern, efficient and highly appreciated facility is the access to prestigious databases and information: ScienceDirect (Freedom Collection), Springerlink - Journals, ProQuest Central, IEEE IEL, Forest Science Database, Thomson ISI - Web of Science, Thomson ISI - Journal Citation Reports, Thomson ISI - Derwent Innovation Index, Scopus (provided through the ANELiS Plus project).

Recommendations:

The indicator is fulfilled.

Criterion A.3. Quality of Human Resource

Standard A.3.1. At the level of each Doctoral School there are sufficient qualified staff to ensure a quality educational process.

- *general description of the standard analysis.*

Performance Indicator *A.3.1.1. The share of Doctoral advisors coordinating simultaneously more than 8 doctoral students but not more than 12 during their doctoral studies⁴ does not exceed 20%.

- Within the doctoral studies programs of the “Ferdinand I” Military Technical Academy 22 doctoral supervisors work, of which 7 full professors and 15 associate professors, who coordinate the doctoral training activity of doctoral students in different stages of training.
- Thus, the situation of doctoral supervisors who simultaneously coordinate more than 8 doctoral students but not more than 12 who are in the period of doctoral studies (3 or 4 years to which are added the legally granted extension periods) does not exceed 20%.
- Four doctoral advisor had 10 to 11 doctoral students during doctoral study.

Recommendations:

In the next period “Ferdinand I” Military Technical Academy must increase the number of doctoral advisors.

The indicator is fulfilled.

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



Performance Indicator A.3.1.2. *At least 50% of all teaching/research staff involved in teaching/research activities related to training programs for advanced university studies or in individual research/art creation programs have a full-time employment contract for an indefinite period with the IOSUD.*

- In the Doctoral School of FIMTA, the teaching activities related to a doctoral studies program are provided by tenured teachers and researchers from the institution.
- PhD supervisors should guide doctoral topics in accordance with the priority research areas of the national defense system, public order and national security, by using advanced principles and methods for explaining and interpreting from multiple perspectives, theoretical situations/problems and new and complex practices specific to the field.
- For students enrolled in the 2015-2016 academic year, teaching activities, for advanced university study preparation programs and in individual scientific research programs, are coordinated by 43 full-time professors and 11 associate professors.
- For students enrolled in the 2016-2017 academic year, the teaching activities for advanced university study programs and individual scientific research programs are coordinated by 28 tenured teachers and 16 associate teachers.
- For students enrolled in the 2017-2018 academic year, the teaching activities for advanced university study programs and individual scientific research programs are coordinated by 27 tenured teachers and 13 associate teachers.
- For students enrolled in the 2018-2019 academic year, the teaching activities for advanced university study programs and individual scientific research programs are coordinated by 38 tenured teachers and 12 associate teachers.
- For students enrolled in the 2019-2020 academic year, the teaching activities for advanced university study programs and individual scientific research programs are coordinated by 32 tenured teachers and 9 associate teachers.

Recommendations

The indicator is fulfilled.

Domain B. EDUCATIONAL EFFECTIVENESS

- *general description of the domain analysis.*

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

Standard B.1.1. Candidates admitted to doctoral studies demonstrate academic, research and professional performance and are diversified as social representation and by gender.

- *general description of the standard analysis.*

Performance Indicator *B.1.1.1. *Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest in science or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.*

- Within Ferdinand I Military Technical Academy vacancies for PhD entry examination are approved by the Minister of National Defense in line with the human resources policy about the Minister of National Defense. Only specialists in defense, public order and

national security structures can apply for the budget-financed vacancies with full attendance or without full attendance.

- The state-budget financed vacancies with full attendance and without full attendance are assigned to candidates who passed the entrance examination by the Doctoral School Council, taking into account the number of vacancies, candidates' capabilities and the relevance of the research topics proposed by PhD supervisors for the Army and defense industry.

Recommendations:

The indicator is fulfilled.

Performance Indicator B.1.1.2. *The IOSUD/doctoral school(s) have a policy for stimulating enrollment of doctoral students coming from disadvantaged social environments, by allocating reserved positions in the admission procedure and/or granting special scholarships, as well as organising support programs to prevent drop-outs.*

- "Ferdinand I" Military Technical Academy enables full access to PhD training for all social categories established by the Minister of National Defense, given its specificity as a military higher education institution.
- According to the decision of the Academic Senate, some measures have been established to support PhD students who can benefit from tuition fee discounts or payment by installment.

Recommendations:

The indicator is fulfilled.

Criterion B.2. The content of doctoral programs

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

- *general description of the standard analysis.*

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

- The training program based on advanced academic studies in the Doctoral School of "Ferdinand I" military Technical Academy is suitable for improving the research skills of PhD students and strengthening ethical behavior in science.
- Programs are focused on an active learning model that enables PhD students to acquire the necessary skills for the PhD academic level.
- In this sense, the training program of the doctoral school is a synthesis of fundamental disciplines, specialist courses and electives, being based on the tradition of the doctoral school in the academy, on the novelty and complexity of the disciplines taught by tenured professors, whose skills are reflected in their résumés, lists of works and discipline descriptions.
- For this purpose, the training module based on advanced academic studies includes for a semester I of the first year between 3 and 5 disciplines established depending on the PhD field, that cumulate an aggregate of 30 transferable credits.



Recommendations:

The indicator is fulfilled.

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

- According to Order of Ministry of National Education no. 3131/2018, the training program based on advanced university studies also includes a discipline devoted to ethics in scientific research and intellectual property: “Ethics and academic integrity” (1hour/course; 3ECTS)

Recommendations:

The indicator is fulfilled.

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

- The training program of the doctoral school contains a series of lectures with adequate scientific content, updated in line with the state-of-the-art. The feedback of PhD students is very important in improving the educational process of the Doctoral School.
- The training program based on advanced university studies is endorsed by CSD and validated by CSUD. Also, the discipline descriptions (which indicate the specific skills required for each discipline) the training program for PhD students is based on are endorsed by CSD and approved by the director of the Doctoral School.
- Within the training program based on advanced academic studies, PhD students go through a training module for specialist skills and a training module for general skills.
- Within the individual scientific research program (years II-III), the supervisor guides the PhD student to defend several at least three papers (research reports) complying with his doctoral thesis. The supervision committee examines the PhD students’ tests and research reports.

Recommendations:

The indicator is fulfilled.

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

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

- *general description of the standard analysis.*

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

Performance Indicator B.3.1.1. For the doctoral school there are in place mechanisms for valorification of the results of doctoral studies in accordance with the specificity of the particular domain (i.e. technological transfer, products, patents in the case of exact sciences; products and services for social sciences and humanities; festivals, contests, recitals, sports competitions; cultural-arts orders in the vocational domain; presentations at national and international conferences, publication of research results in national and international publications, engaging doctoral students in writing research-development projects etc.)

- The teaching staff and PhD students carry out scientific research activity provided in the Annual Research and Development Plan of "Ferdinand I" Military Technical Academy and is structured as follows:
 - Research and development work financed within the National Plan for Research, Development and Innovation
 - Research-development works included in the Sectorial Research-Development Plan of the Ministry of National Defence
 - Research-development works that are carried out based on scientific research contracts concluded with economic agents in Romania and abroad;
 - Projects financed from European funds. In 2016, the National Research-Development Institute for Materials Physics, the Polytechnic University of Bucharest and "Ferdinand I" Military Technical Academy, filed an Application for "Microwave antenna with resonators from different dielectric materials" patent.
 - PhD students of the Doctoral School participate in research studies within some projects whose results are valued both in the military and civilian environment.
- The institution periodically publishes, due to an editorial board made up of specialists with highly qualified scientific teaching activity, the following journals:
 - JOURNAL OF MILITARY TECHNOLOGY - (<https://jmiltechnol.mta.ro/>);
 - JOURNAL OF PHILOLOGY AND INTERCULTURAL COMMUNICATION - (<https://jpic.mta.ro/>).
- Among the numerous scientific events run and held within "Ferdinand I" Military Technical Academy (international conferences, scientific symposia for teachers and students alike), we must mention the events run periodically as follows:
 - Scientific communication session with international participation "MODERN TECHNOLOGIES IN THE XXI CENTURY" (32 editions) – run every two years.
 - The scientific conference COMMUNICATIONS run with the Polytechnic University of Bucharest, chaired by the International Institute of Electrical and Electronic Engineering – run every 2 years - (<https://comms.ro/>);
 - The scientific conference SEC-IT &C (International Conference on Security for Information Technology and Communications) run with the Academy of Economic Studies in Bucharest, -run annually- (<https://sites.google.com/view/secitc/>);
 - The annual session of the Student International Scientific Conferences (<https://www.mta.ro/international/cerc-ro/>);
 - Military Culture and War Experience (<https://mcwe2020mta.wixsite.com/website>)
 - The dimension of internationalization through bilateral cooperation between Rannis The Icelandic Center for Research, Reykjavik and Military Technical



Academy, 19th May 2017 (<http://www.mta.ro/dicisro/index.html>). - 7th International Conference Computers and Artificial Intelligence, ECAI 2015.

Recommendations:

The indicator is fulfilled.

Criterion B.4. Quality of doctoral theses

Standard B.4.1. Doctoral theses fulfil high quality standards

- *general description of the standard analysis.*

Performance Indicator B.4.1.1. *At the level of IOSUD, the percentage of theses non- validated, at the level of General Council of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNADTCU), without the right of further amendments and re-organizing the process of public defending, is not exceeding 5% in the last 5 years.*

- The quality of university study programs, within the fields where there are PhD studies, is based on content, scientific level and topicality. They have been worked out to be coherent and compatible with similar programs in Romania and in the European Union
- In IOSUS-FIMTA, in the period 2015-2020 several 76 PhD theses were completed, as follows:
 - 15 PhD theses in the field of “Electronic engineering, telecommunications and information technologies”;
 - 10 PhD theses in the field of “Computers and information technology
 - 37 PhD theses in the field of “Mechanical Engineering”;
 - 2 PhD theses in the field of “Electrical Engineering”;
 - 5 PhD theses in the field of “Civil Engineering and installations”;
 - 2 PhD theses in the field of “Industrial Engineering”.

Recommendations:

The indicator is fulfilled.

Domain C. QUALITY MANAGEMENT

- *general description of domain analysis.*

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

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

- *general description of the standard analysis.*



Performance Indicator C.1.1.1. *The IOSUD shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the doctoral school(s), the following assessed criteria being mandatory:*

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

- The development of quality culture in education is promoted at the level of top management by the "Quality policy statement " of the Rector of ATMFI and, "Management commitment", Documents with a strong programmatic and mobilizing character for the entire staff of the institution.
- The reference chosen for the quality management system in ATMFI is SR EN ISO 9001/2015. The Vice-Rectors and the General Administrative Director lead and are responsible for the design, implementation, maintenance and improvement of the quality management system (SMQ) in the sectors for which they are responsible.
- Commission for Quality Assessment and Assurance in ATMFI - CEAQ- is a collective working body of ATMFI composed of representatives of teachers, students, non-teaching staff and beneficiaries (employers). CEAQ implements ATMFI Senate decision on quality assurance and elaborates Annual report on quality assurance, identifies, analyzes and proposes solutions and decisions regarding SMQ.
- The Quality Assurance Department - DAQ is a functional support structure for SMQ at the ATMFI level containing the minimum human resources necessary for the design, implementation and support of SMQ.
- From the content of the management commitment and of the quality policy statement, the main components of the university's quality policy can be deduced:
 - meeting the requirements of employers and obtaining satisfaction their through competence and efficiency - as a fundamental objective;
 - continuous improvement of educational processes - as a fundamental feature of the quality management system in the "Ferdinand I" Military Technical Academy;
 - fulfillment of educational missions, scientific research and activities related, taking into account the requirements, needs and expectations of employers;
 - developing the culture of the organization oriented towards continuous improvement of management and services, as well as the effectiveness of the management system;
 - the constant search for ways to improve the quality of services, the conditions of work and overall performance at the ATMFI level;
 - permanent analysis of the management policy in the field of quality, to be adapted to the implicit and explicit requirements of employers.
- The internal evaluation procedures, previously mentioned, are to be worked out by the designated structures (CSD, CSUD, respectively), and will be subsequently looked into to be endorsed by The Trustee Committee and the Academic Senate of FIMTA. The internal evaluation processes are carried out following unbiased principles and transparency, the evaluation procedures (including the criteria) and the evaluation results being brought into bold relief to the Doctoral School members (PhD supervisors, PhD students).



- The Commission for evaluation and quality assurance, the Department for quality assurance of ATMFI, as well as the other structures, at the level of faculties, departments and services continuously promote an improvement of the educational quality standards by modernizing and applying the procedures and regulations necessary for good development. of the educational process in the institution.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.1.1.2. *Students' associations and, according to the case, representatives of students organise elections in the community of doctoral students, for positions in the CSUD, by universal vote, direct and secret, all doctoral students having the right of electing or being elected.*

- The Students' Union of FIMTA is designated to run and conduct elections for student representatives in the leading university structures of the academy, faculties and Doctoral School.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.1.1.3. *Students' associations and, according to the case, representatives of students organise elections in the community of doctoral students at the level of each doctoral school, for positions in the councils of doctoral schools, by universal vote, direct and secret, all doctoral students having the right of electing or being elected.*

- Doctoral students elect, among themselves, by universal, direct and secret ballot, all doctoral students having the right to elect and be elected, representatives in the Council of University Doctoral Studies.
- The mandate of the representatives in the Council of University Doctoral Studies ends at the moment of the public defense of the thesis or at the end of the mandate.

Recommendations:

The indicator is fulfilled.

Performance Indicator *C.1.1.4. *Following the internal evaluation, IOSUD and the doctoral schools draft strategies and policies aiming to eliminate the identified deficiencies and to stimulate scientific and academic performance of IOSUD.*

- Every academic year, the CSUD director works out an operational plan for PhD training (https://mta.ro/wp-content/uploads/2021/02/PLAN-OPER-ATM-2020-2021-DOCTORAT_min.pdf) devoted to the current approaches to developing the educational offer for the national defense and security system, measures for the improvement of the PhD study program, improvement of the formative-educational process, national and international visibility and acknowledgment, new proposals and trends for PhD studies.

Recommendations:

The indicator is fulfilled.

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



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

- *general description of the standard analysis.*

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

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

- Regulation of the Doctoral School is based on the following documents:
 - The national education law no. 1/2011;
 - Government Decision no. 681/2011 regarding the approval code of University Studies of doctorate, hereinafter referred to as Code;
 - Government Decision no. 134/10.03.2016 for modification and completion code doctoral studies, approved by Government Decision no. 681/2011;
 - Government Decision no. 264/2007 on the organization and functioning of the Academy Military Techniques;
 - University charter of the Military Technical Academy
 - Regulations for the organization and operation of doctoral studies called in continuation ATM-Doctoral Regulations.

Recommendations:

- More PhD and postdoctoral PhD studies of Electrical Engineering based on the English language.

The indicator is fulfilled.

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

- *general description of the standard analysis.*

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

- All PhD students have open access to the ANELIS+ platform with academically relevant databases for particular PhD fields, including Web of Science. Moreover, Military Technical Academy, in collaboration with the American Society of Mechanical Engineering (ASME) also announces open access to American Society of Mechanical Engineering (ASME) database, a prestigious scientific association that publishes 29 top scientific reviews and approximately 160 scientific monographs covering disciplines such

as engineering, applied mechanics, engineering and industrial management, mechatronics, transport industries, automobile production, bioengineering, design, production, energy, standards and certifications, technology and society, career, education, etc. FIMTA library provides the required bibliography for students to study, with the specification that the available titles are supplemented every year.

- The general objectives of the Anelis Plus Project are:
 - Ensuring access to electronic documentary information resources through the acquisition of full text databases/platforms and bibliographic and bibliometric databases.
 - Creating a virtual campus, to allow the scientific community and the Romanian educational access online resources and deposit not only documents (national repository) that will be developed within the project, both through the acquisition of archives, and the contribution of scientific publications of the Romanian academic community.
 - Promoting, at the national level, the initiative to develop an open-access system to scientific publications; creating links with the Romanian publishing platform SCIPPIO and with the open access institutional repositories hosted by Romanian universities and libraries.
 - Ensuring mobile access to both international publications and online databases, as well as to the national document repository.
- Association of Universities, Research-Development Institutes and Central University Libraries in Romania - ANELIS PLUS supports the Romanian scientific community through the project "National Electronic Access to Scientific Literature to Support the Research and Education System in Romania - ANELIS PLUS 2020". On the project website, <http://anelisplus2020.anelisplus.ro/>, and on the Association's page, <http://www.anelisplus.ro/>, you can find the resources subscribed by the project for the institution in which you carry out your activity.

Recommendations:

The indicator is fulfilled.

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

- PhD students have access, upon request and with the consent of their PhD supervisor, to the software for verifying the degree of similarity existing in FIMTA. All the elaborated PhD theses are verified through this software before being defended in front of the supervision committee. The software is acknowledged by CNACTDCU (sistemantiplagiat.ro).

Recommendations:

The indicator is fulfilled.

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



- IOSUD/The Doctoral School has a research infrastructure that supports the development of activities specific to PhD studies. FIMTA has laboratories, specialist rooms, centers of excellence that are supplied with equipment and technical means necessary to carry out the educational process for undergraduate, master's and PhD studies.
 - Center of Excellence for "Integrated Weapons and Engineering Systems (CESIAG)" (Security Laboratory for extreme loads of construction and engineering structures; Laboratory of Integrated Weapons and Defense Systems CBRN);
 - Center of Excellence for "Self-Propelled Systems and Technologies for Defense and Security (CESATAS)" (Laboratory of Aerospace Systems and Technologies; Laboratory of Self-propelled Systems);
 - Center of Excellence for "Advanced Cyber Security Technologies (CETASC)" (Cyber Warfare Laboratory, Computer Network Security Laboratory, Computer Applications Security Laboratory);
 - Center of Excellence for "Communications and Information Technology (CECTI)" (Laboratory of Integrated Communication Systems; Laboratory of Advanced Technologies in Radio communications);
 - Center of Excellence for "Robotics and Autonomous Systems (CERAS)" (Robotics Laboratory; Laboratory of Autonomous Systems);
 - GEOINT Center -Technological Development Center.

Recommendations:

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

The indicator is fulfilled.

Criterion C.3. Internationalization

Standard C.3.1. IOSUD/Doctoral school has a strategy in place and it is applied to enhance the internationalization of doctoral studies.

- *general description of the standard analysis.*

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

- Coordination at European level, within the strategic partnership project "European Common Technical Semester for Defense and Security" (2020-2022) funded by Erasmus + program, of a consortium of military academies consisting of the Military University of Technology in Warsaw (Poland), the National Military University "Vasilevski", the Faculty of Shumen (Bulgaria), the French Air Force Academy in Salon de Provence (France) and the Hellenic Air Force Academy from Athens (Greece), to which are added other EU

military academies with concerns in the field of military-technical education, to organize for the first time a joint international technical military semester at EU level;

- Coordination at the European level, under the auspices Erasmus Military initiative and the aegis European Security and Defense College, a working group composed of internationalization specialists, representatives of military academies with a technical profile, aiming at the development of new educational projects for the development of the internationalization of military-technical education at EU level (LoD13 within the Military Erasmus);
- Teachers and students of “Ferdinand I” Military Technical Academy (FIMTA), including PhD supervisors and PhD students, are actively involved in the interuniversity collaboration of FIMTA with over 50 military and civilian higher education institutions, in France, Great Britain, Portugal, Italy, Spain, Holland, Poland the Czech Republic, Hungary, Bulgaria, etc. 20 PhD students completed ERASMUS+ mobilities

Recommendations:

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

The indicator is fulfilled.

Performance Indicator C.3.1.2. IOSUD supports, including providing financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.

- In addition to the co-supervised PhD agreements conducted, FIMTA invited various experienced teachers and scientific researchers (Annex no. C3-08) to carry out working visits, teaching activities or to participate in workshops or conferences run within FIMTA. All these events were attended by FIMTA PhD students. There are 37 partners Universities from 12 EU countries from 2015. To 2021. Years.
- Thus, in the period 2015-2020, within the Erasmus+ program, an aggregate of 62 teachers from EU universities carried out teaching or other mobilities in FIMTA where PhD students participated following their research field and the type of activity run. Moreover, during the same period, an aggregate of 62 activities (working visits, NATO/STO working groups, workshops, conferences, seminars and other activities) were run in FIMTA and attended by teachers, military personnel and internationally acknowledged scientific research personnel. These activities were also attended by FIMTA teachers and PhD students.
- Participation in an international competition organized under the Erasmus program to obtain funding for a strategic partnership project + in a consortium of military academies in Italy, Poland and Bulgaria, in the field of developing digital skills to improve internationalization and the quality of the educational process in technical universities EU military;
- Organization in ATMs, under the auspices Erasmus Military initiative and European Security and Defense College of a summer school in the field Cyber security, robotics and autonomous systems, lasting one week, in collaboration with the Polytechnic University of Bucharest, with teaching in English, for civilian and military personnel from the country and abroad;



- Given the specifics of our institution and our country's membership in NATO and the EU, in the next period, we will seek to increase the participation of the institution's specialists in various initiatives, groups, or panels organized under the auspices of NATO and the EU.
- Increasing the number of foreign students carrying out study or internship mobility in ATMs and increasing the number of foreign teachers carrying out teaching or training activities in ATMs with:
 - supporting ATM teachers/departments / faculties to organize in ATM scientific events, working groups within NATO-STO or EU-EDA;
 - attracting financial funds from the Erasmus program as well as from other programs (EEA, scientific research projects, own funds, etc.) to finance one semester or shorter mobility of ATM students, as well as teaching mobility or training of ATM staff
 - identification of methods for rewarding and recognizing ATM teachers for the coordination of foreign students;
 - diversification of the educational offer of short-term modules with teaching in international languages for foreign students;
 - encouraging ATM students to participate together with other foreign students in the language teaching modules organized within the institution.

Recommendations:

The indicator is fulfilled.

Performance Indicator *C.3.1.3. *At least 10% of the doctoral theses of every doctoral schools of the IOSUD are drafted and/or submitted in an international foreign language or are organised in international co-tutelage.*

- Most of the 76 doctoral dissertations defended in the period 2015-2020 are in Romanian. The increase in interest came when ATM included supervisors from foreign countries from EU universities. The reason for this is the higher citation of papers in English. Yet only 3 these are written in English.

Recommendations:

- It is necessary to fully meet this criterion in the coming period.

The indicator is fulfilled.

Performance Indicator C.3.1.4. *The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees⁶ etc.).*

- In the period 2016-2020, in order to increase its visibility and strengthen its international acknowledgment, "Ferdinand I" Military Technical Academy participated in various educational fairs to promote its educational offer and scientific research: ERACON 2016, ERACON 2017, ERACON 2018, ERACON 2019, EAIE 2017, EAIE 2018 and EAIE 2019.

⁶ Doctoral studies are completed by presenting the doctoral thesis in public session in front of a committee whose members hear and judge the final public presentation of the thesis



- Each year from 2016 until 2019, FIMTA participated in the Erasmus Coordinators' International Conference (ERACON)
- The main objective of ERACON conferences is to promote the Erasmus program among EU and non-EU universities.
- Among all ERACON conferences where FIMTA participated with presentations and stands: ERACON 2016, Thessaloniki, Greece, 10th -14th May 2016; ERACON 2017, Maribor, Slovenia, 8th -14th May 2017, ERACON 2018, Murcia, Spain, 8th -12th May 2018, ERACON 2019, Paphos, Cyprus, 1st-5th May 2019.
- Among the EAIE conferences where FIMTA participated with presentations and stands, it is worth mentioning: EAIE 2017, Seville, Spain, 11th-16th September 2017, EAIE 20a8, Geneva, Switzerland, 10th-16th September 2018, EAIE 2018, Helsinki, Finland, 24th-27th September 2019.

Recommendations:

The indicator is fulfilled.

Criterion C.4. System for assurance of ethical and academic integrity

Standard C.4.1. IOSUD/Doctoral school has a functional and efficient system in place for prevention and assuring ethical and academic integrity norms

- *general description of the standard analysis.*

Performance Indicator C.4.1.1. *IOSUD, applies the current provisions regulating ethics, deontology/academic integrity, respectively to academic freedom and has developed:*

- *policies based on prevention regarding possible violations of the Code of ethics and academic integrity, demonstrated by public postionings, studies, analyses or measures taken;*
- *practices and mechanisms for preventing fraud, from an institutional perspective as well as from the perspective of the doctoral students;*
- *practices for preventing possible fraud in academic activity, research or any other activity, including active measures for preventing and avoiding plagiarism of any kind, as well as promoting ethical and integrity/deontology principles or observing intellectual property norms, authors' rights and other related rights, among all members of the academic community;*
- *administrative instruments which allow applying effective and eliminatory sanctions;*
- *mechanisms and measures to assure equal opportunities and protection against intolerance and discrimination of any kind;*

IOSUD monitors and permanently evaluates these practices and can prove they are applied to all activities and engagement of students in all these processes, and the results of the monitoring is made public yearly or whenever it becomes necessary.

- The code of ethics and professional ethics at the academy (<https://www.mta.ro/wp-content/uploads/2019/02/codul-de-etica.pdf>) includes moral principles, ethical norms and sanctions that make fundamental all the collaboration relations between students, PhD students, trainees and university teachers, scientific researchers, instructors, subunit commanders, auxiliary teaching staff, auxiliary research staff, administrative staff and staff from the command structures of the academy.
- The activity of the University Ethics Commission is mainly responsible for resolving the ethical situations resulting from complaints, notifications or self-notifications of the Commission as well as the assessment of the ethical climate in the Military Technical Academy "Ferdinand I".
- In 2020, the Regulation of the University Ethics Commission of the "Ferdinand I" Military Technical Academy was elaborated, approved by the University Senate in the meeting of 27.03.2020. It establishes the manner of establishment and functioning of the University Ethics Commission within the institution taking into account the legislation in force (National Education Law no. 1/2011 with subsequent amendments and completions, Law no. 206/2004 on good conduct in scientific research, technological development and innovation, with subsequent amendments and completions, the Code of Ethical Conduct for Contract Military and Civilian Personnel from the Ministry of National Defense No. M94/2004 and the Code of Ethics and Professional Ethics of the Military Technical Academy "Ferdinand I").
- During that period, there was only one situation that required the Commission to intervene. Thus, the Ministry of Education and Research sent to the Military Technical

Academy "Ferdinand I" a memorial which indicates several possible violations of National Education Law no. 1/2011(with subsequent amendments and completions) and a Law no. 202/2002 on equal opportunities between women and men, committed by teachers and management from the Department of Computers and Cyber Security within the Faculty of Information Systems and Cyber Security of the institution, requesting the presence of the point of view resulting from the analysis of the facts and circumstances reported.

- The right to intellectual property is respected and protected in the academy so that all those staff members who participated with public results in different stages of scientific research are mentioned and promoted in the spirit of professional honesty and merit acknowledgment.
- Teachers and researchers must respect the copyright of the work they make use of in carrying out any intellectual study, by precisely quoting and/ or indicating the references mentioned.
- In the academy are prohibited:
 - a) the sale of scientific papers to forge the author of a diploma, dissertation, PhD thesis and other papers;
 - b) plagiarism
 - c) the entrustment by any author of the scientific products published to another person to be republished under another name than that of the author/ authors;
 - d) the illegal appropriation of the copyright of any intellectual work in other situations that do not fall under the provisions referred to in (a) and (c); 49 out of 60.
 - e) the inclusion of false data in the files worked out for applying for contracts and grants, teaching and research positions, or employment.
 - f) the orientation of the undergraduates', master degree's students and PhD students' research activity to obtain material or non-patrimonial personal benefit by the guiding teacher;
 - g) any other form of intellectual fraud such as cheating in exams or competitions, falsification of research results, the substitution of work or identity of the persons examined;
 - h) the constraint of exam participation or pass by forcing students to purchase their academics' coursebooks or published work.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.4.1.2. *All intimations regarding suspicion of plagiarism related to doctoral theses have been analysed and resolved by the IOSUD within the time interval legally established for expressing in writing its position regarding the intimation received.*

- IOSUD/ The PhD School did not get any notification regarding suspicions of plagiarism related to PhD theses.
- The acquisition of methods, procedures, scientific and technological results, findings of scientific research conducted by another author is plagiarism, as well as the full or partial takeover of material by another author, without indicating its source and presenting it as one's creation.
- Misconduct in academic research implies (and is not limited to) fabrication, falsification, plagiarism, or deception in proposing, carrying out, or reporting results of research and

deliberate, dangerous, or negligent deviations from accepted practice in carrying out research. It includes failure to follow an agreed protocol if and when this failure results in unreasonable risk or harm to persons, the environment, and when it facilitates misconduct in research by collusion in, or concealment of, such actions by others. Misconduct also includes any plan or attempt to do any of these things. It does not include honest error or honest differences in interpretation or judgment in evaluating research methods or results, or misconduct unrelated to research processes.

Recommendations:

- The Chair of the Ethics Committee may invite internal or external experts who are not involved in the disputed matter and who are not members of the Committee to attend meetings. They may be heard or participate in discussions but have no vote.
- The European University Institute is committed to the provision of the appropriate direction of research and supervision for researchers. Supervisors are expected to adhere to the Code of Practice for Doctoral Supervision at the EUI, which delineates the supervisory relationship, the assessment of research progress, and the procedures to resolve problems in the supervisory relationship.
- The Academic Departments should ensure that all researchers undertake appropriate training in research design, methodology, regulatory and ethics approvals and consents, equipment use, confidentiality, data management, record-keeping, data protection and publication, the appropriate use of licensed research resources and respect for the intellectual property rights of third parties.

The indicator is fulfilled.

Performance Indicator C.4.1.3. *Annual Reports of the Ethics Commission of the IOSUD contain information on the stage of solving each case of intimation or own-initiative intimation regarding violation of norms or ethical aspects relevant for university doctoral studies. description of the facts, the findings from the assessed institution's documents and the evaluation visit itself.*

- At the academy level, there is the University Ethics Committee which is appointed by the Board of Directors of "Ferdinand I Military Technical Academy" and approved by the rector of the institution. The committee members are people with professional prestige and moral authority.
- The activity of the Academic Ethics Committee is established based on the Regulation of the Academic Ethics Committee of "Ferdinand I Military Technical Academy" (Appendix no.C3-09).

Recommendations:

- The Ethics Committee will produce a report stating: the procedures under which the formal investigation was conducted; how and, where appropriate, from whom information was obtained; the findings of the committee and the basis for these; a summary of the views of the respondent; and a description of any recommendations made by the committee.
- The Ethics Committee may carry out:
 - a) a preliminary investigation to ascertain whether there is sufficient substance to the allegation as to warrant a more thorough investigation;
 - b) a formal inquiry that may include the consultation or involvement of external experts when needed.

- **Recommendations:**

The indicator is fulfilled.

Performance Indicator C.4.1.4. *The measures taken by IOSUD after the final decision of CNADTCU to withdraw the title of “doctor” following accusations of plagiarism have addressed all the aspects mentioned in CNADTCU’s decision and in the current legislation.*

- There were no such cases in IOSUD-FIMTA.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.4.1.5. *The measures aiming to prevent academic fraud in the doctoral studies, taken by IOSUD, could be:*

- a) Suspension of the right to advise newly enrolled doctoral students, for a period of 3 years, in the case of doctoral advisors having coordinated a doctoral thesis with a definitive decision of withdrawal of the “doctor” title for plagiarism;*
- b) Exclusion from the IOSUD of the doctoral advisor having coordinated at least two doctoral theses with definitive decisions of withdrawal of the “doctor” title for plagiarism;*
- c) Suspension of the right to organize the admission process of new doctoral students in the Doctoral studies domain, for a period of 2 years, if in the respective domain a doctoral thesis has been finalized and defended with a definitive decision of withdrawal of the “doctor” title for plagiarism.*

- There were no such cases in IOSUD-FIMTA.

Recommendations:

The indicator is fulfilled.

Performance Indicator *C.4.1.6. *The scientific reviewer’s members in the commissions for public defense of two or more doctoral theses with definitive decisions of withdrawal of the “doctor” title for plagiarism have not been nominated in other commissions for public defense of doctoral theses for at least 3 years.*

- There were no such cases in IOSUD-FIMTA.

Recommendations:

The indicator is fulfilled.

Performance Indicator C.4.1.7. *IOSUD has a database open to the public containing all the doctoral theses defended in the institution beginning at least in 2016 in a format including the domain, author, doctoral advisor, title of the thesis and the thesis in electronic format (if there is an agreement of the author).*

- IOSUD publishes, on <https://mta.ro/teze-de-doctorat-sustinute>, in compliance with the regulations in force regarding data protection, information that includes: the date of the PhD thesis defense, a soft copy of the PhD thesis summary in English and Romanian, PhD students’ résumé.
- The PhD thesis can be found and consulted within the Library of "FERDINAND I" MILITARY TECHNICAL ACADEMY.

Recommendations:



The indicator is fulfilled.

IV. SWOT Analysis

<p>Strengths:</p> <p>“Ferdinand I” Military Technical Academy (FIMTA) has the status of “University of education and scientific research”, according to the EUA evaluation.</p> <p>FIMTA is the only military university in Romania with programs only in the fundamental field of Engineering Sciences;</p> <p>FIMTA has a quality management system (SMC) following SR EN ISO 9001:2015-demanding quality assessment system;</p> <p>Permanent upgrade of the teaching and research apparatus and equipment; good use of modern teaching methods (IT and multimedia equipment);</p> <p>the corresponding brand of our university in the field of research and education in military engineering sciences won through sustained efforts of the academic community;</p> <p>the existence of teaching staff (PhD supervisors, teaching and research staff) with certain pedagogical and research qualities;</p> <p>the research and educational infrastructure is adapted to the specificity of the university;</p> <p>Access to prestigious international databases (eg. Clarivate Analytics- Web of Science, Scopus, ScienceDirect, Springerlink, IEEE Xplore, Forest Science Database, ProQuest, ACM Digital Library, etc.);</p> <p>Significant national and international visibility substantiated through collaboration with renowned universities and specialists in teaching and scientific research activities;</p> <p>visibility of the results of research conducted by the Doctoral School (PhD supervisors, PhD students) through articles published in journals and volumes ISI and BDI listed/ indexed, books/ chapters in books</p>	<p>Weaknesses:</p> <p>The number of high school graduates attending PhD programs, especially those in the fields of engineering, is relatively low;</p> <p>Low motivation and disinterested participation of a significant number of students in PhD programs;</p> <p>Insufficient financial decentralization at the level of Doctoral Schools;</p> <p>The relatively low number of theses written under international co-supervision.</p>
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<p>published in prestigious publishing houses in Romania and abroad, patents, etc;</p> <p>cooperation with universities in the EU and outside the European space; participation of PhD supervisors from DS in training-teaching activities in other universities, through exchanges in staff mobility programs (eg. ERASMUS+);</p> <p>the participation of a large number of PhD supervisors from the Doctoral School in the editorial committees in a series of journals/ volumes published by publishing houses in Romania and abroad, including in the Journal of Military Technology series (covering all PhD fields in IOSUD-FIMTA);</p> <p>the existence of a democratic system for making decisions and a transparent system for communicating them in academia;</p> <p>the existence and appropriate functioning at the level of the academy of the management structures (Senate, Senate Boards, Board of Ethics), as well as the Board of PhD studies-CSUD (IOSUD-FIMTA management forum);</p> <p>FIMTA has an efficient and effective academic and military management.</p>	
<p><u>Opportunities:</u></p> <p>the premise of the involvement of the Doctoral School in research on techniques and technologies necessary for national defense and security;</p> <p>the premise of the development of the Doctoral School at national and international levels;</p> <p>concluding framework agreements between the Doctoral School and the traditional partners in industry and research that have PhD students among the employees;</p> <p>the possibility of working with economic agents, with the local public authority in various research projects, continuing education and consulting;</p> <p>access to databases, online libraries, specialist journals;</p>	<p><u>Threats:</u></p> <p>increasing competition in the field of engineering higher education at national and international levels;</p> <p>demotivating pay, especially for young teachers;</p> <p>legislative restrictions imposed on personnel policies and uncertainties in the field of labour legislation;</p> <p>legislative volatility that determines numerous/ frequent changes of internal regulations and methodologies;</p> <p>downward demographic trend that will lead to a decrease in the number of students;</p> <p>the decrease of the capacity to attract PhD students due to the reduction of the number of full-time PhD supervisors (due to the retirement and difficult to meet conditions), the disappearance of POSDRU scholarships (which</p>

<p>possibilities to get financial resources from sources other than public ones- European funds, international research grants;</p> <p>framing the PHD study programs in the European development strategy;</p> <p>the existence of a fruitful collaboration in the interdisciplinary fields specific to the doctoral school;</p> <p>attracting PhD students from abroad, especially from EU third countries and military universities.</p>	<p>were the main source of funding for doctoral and postdoctoral programs over the last 5 years in the reporting period 2015-2020) and the lack of attractiveness of existing PhD research scholarships/grants;</p> <p>diminishing the availability of companies for investments in the training of highly-qualified specialists and for PhD research, caused by the economic crisis.</p>
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V. Overview of judgments awarded and of the recommendations

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

VERY IMPORTANT!!! – *Each identified weakness must be correlated with at least one recommendation to improve the situation! No weakness can be identified without formulating at least one recommendation regarding the way it could be corrected!*

No	Type of indicator (*, C)	Performance indicator	Judgment	Recommendations
1	A.1.1.1.	<p><i>The existence of specific regulations and their application at the level of the IOSUD, respectively at the Doctoral School(s):</i></p> <p>a) <i>the internal regulations of the administrative structures (the institutional regulations for the organization and conduct of doctoral studies programs, the regulation(s) of Doctoral School(s);</i></p> <p>b) <i>the Methodology for conducting elections at the level of the Council of University Doctoral Studies (CSUD), respectively at</i></p>	<ul style="list-style-type: none"> ➤ The regulation includes the transposition of the provisions of the existing national legislation and of the Ministry of National Defence regarding the organization and development of doctoral studies based on the scope of the "Ferdinand I" Military Technical Academy. The regulation for the organization and development of doctoral studies was revised during the meeting of the Council for Doctoral University Studies, on 08.05.2017, and approved in the meeting of the University Senate, on 23.05.2017. ➤ The constitution/completion of the university management structures and the establishment of the persons to be appointed in university management positions is achieved through the election procedure, respecting the principle of universal, direct and secret voting, by participating in the voting the persons with voting rights to be registered. on voting lists. The doctoral school council consists of 4 members, of which 3 doctoral supervisors and 1 doctoral student (1/4 = 25%). The composition of the Doctoral School Council consists of the director and 4 members and is visible at https://mta.ro/conducere-scoala-doctorala. 	<i>The indicator is fulfilled</i>

		<p><i>Doctoral School(s) including elections by the students of their representatives in CSUD/Council of the Doctoral School (CSD) and the evidence of their conduct;</i></p> <p><i>c) the Methodologies for organizing and conducting doctoral studies for the admission of doctoral students, for the completion of doctoral studies);</i></p> <p><i>d) the existence of mechanisms for recognizing the status of a Doctoral advisor and the equivalence of the doctoral degree obtained abroad;</i></p> <p><i>e) functional management structures CSUD/Council of the Doctoral School with evidence of the regularity of meetings;</i></p> <p><i>f) the contract for doctoral studies;</i></p> <p><i>g) internal procedures for the analysis and approval of proposals about doctoral study programs based on advanced academic studies.</i></p>	<ul style="list-style-type: none"> ➤ The admission competition contains, in addition to the test specific to the field of study, a test of linguistic competence for an international language. The admission competition to doctoral studies is carried out on doctoral fields in front of several admission commissions composed of at least 3 members, one of which is the president of the commission. ➤ Empowerment is the certification of the quality of a person to conduct doctoral theses. The habilitation thesis reveals the didactic and research capacities and performances. The thesis presents in a documented way the professional achievements obtained after conferring the title of doctor in science, which proves the originality and relevance of academic, scientific and professional contributions and which anticipates an independent development of the future research and/or university career. The provisions of the procedure apply to Romanian citizens, citizens of member states of the European Union, the European Economic Area, the Swiss Confederation, as well as citizens of third countries. ➤ At the IOSUD level, the governing and functional coordination forums are the University Senate and the CSUD. The frequency of convening meetings is 1-2 per month and whenever the situation requires it. At the level of the doctoral school, functional management is provided by the Council of the doctoral school. The doctoral school council usually meets once a month and when necessary in situations that require it. ➤ Following the admission to doctoral studies, each admitted doctoral student, regardless of the form of education, concludes a contract of doctoral studies, signed by the doctoral student, the doctoral supervisor, the financial accounting director, the head of the legal department and the rector of the academy. The contract stipulates the rights and obligations of doctoral students, doctoral supervisors and IOSUD, through the doctoral school. ➤ The individual plan of the scientific research program is approved by the director of the Doctoral School. The commissions for supporting the Scientific Research Reports are approved by the director of the Doctoral School. The committee includes the doctoral supervisor and the members of the supervisory committee. The support of the Research Reports is made in public meetings, the meetings being announced, at least 48 hours before the presentation, at the notice board of the Doctoral School. ➤ 	
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2	A.1.1.2.	<p><i>The doctoral school' Regulation includes mandatory criteria, procedures and standards binding on the aspects specified in Article 17, paragraph (5) of the Government Decision No. 681/2011 on the approval of the Code of Doctoral Studies with subsequent amendments and additions.</i></p>	<ul style="list-style-type: none"> ➤ The regulation of the Doctoral School establishes obligatory criteria, procedures and standards regarding the following aspects: <ul style="list-style-type: none"> • acceptance of new leading members of the doctorate. • the mechanisms through which the decisions are taken regarding the opportunity, the structure and the content of the training program based on advanced university studies • the procedures for changing the doctoral supervisor of a certain doctoral student • the conditions under which the doctoral program may be interrupted • ways to prevent fraud in scientific research, including plagiarism • ensuring access to research resources • the attendance obligations of the doctoral students ➤ The regulations of the doctoral school are approved by the universal, direct, secret and equal vote of the absolute majority of the doctoral supervisors. The regulations of the doctoral school are approved by the CSUD and the Senate. The doctoral school regulations establish mandatory criteria, procedures and standards regarding the following aspects: ➤ The acceptance of new doctoral supervisor members, as well as regulations regarding the way in which a doctoral supervisor can be revoked as a member of the doctoral school; - art. 18, para. (4), para (5). 	<p>The indicator is fulfilled.</p>
3	A.1.1.3.	<p><i>Doctoral schools included in IOSUD are organized as disciplinary or interdisciplinary disciplines/thematic, according to Article 158, paragraph (7) of the Law of National Education No. 1/2011 with subsequent amendments and additions.</i></p>	<ul style="list-style-type: none"> ➤ "Ferdinand I" Military Technical Academy organizes and carries out doctoral studies in the fundamental field "Engineering Sciences". The Senate of the "Ferdinand I" Military Technical Academy, on 05.10.2016, decided the merger of the doctoral school "Mechanical and aerospace systems for defense and security, civil and industrial engineering" and of the doctoral school "Electronic, computer and communication systems for defense and security "in a single doctoral school under the name of" Defense and security systems engineering ". ➤ The doctorate from the academy can also be organized in international co-supervision. The co-supervision agreement includes the requirements for the organization and development of the doctorate in each of the two I.O.S.U.D.s, in accordance with the role that each party assumes within the co-supervision and with 	<p>The indicator is fulfilled</p>

			<p>the specific legislation of each country. The agreement provides for the mutual recognition of the scientific title of doctor by the competent authorities of the two countries, based on their competences and in accordance with the legal provisions of each country. The agreement between the parties regarding the co-supervised doctorate may be concluded before the development of the advanced university training program or before the development of the scientific research program.</p>	
4	A.1.2.1.	<p><i>The existence and effectiveness of an appropriate IT system to keep track of doctoral students and their academic background.</i></p>	<ul style="list-style-type: none"> ➤ In the FIMTA, the record of doctoral students is made both in writing in the matriculation register for doctoral university education and in electronic format on the platform of the Integrated Educational Register of the Ministry of Education, in the Unique Matriculation Register and in electronic format in the excel database level of the Doctoral Coordination Department. The database contains the identification data of the doctoral students, the contact data, the doctoral field, the name and surname of the doctoral supervisor, the year of registration, the stage of preparation (exams and reports taken) and the situation of payment of fees. ➤ Students have access to a database of courses. <i>Recommendations:</i> ➤ Translate all documents on the website to English. 	<p>The indicator is fulfilled.</p>
	A.1.2.2	<p><i>The existence and use of a software program and evidence of its use to verify the percentage of similarity in all doctoral theses.</i></p>	<ul style="list-style-type: none"> ➤ In FIMTA the theses are verified with the specialized software existing on the platform https://www.sistemantiplagiat.ro/ ➤ Sistemantiplagiat.ro is a computer program for comparing documents in text format. The similarity ratio is a tool on the basis of which an assessment can be made regarding the originality and quality of the text. There are two similarity coefficients that determine the percentage value of the analyzed text that is identical to other documents. The similarity coefficient 1 shall not exceed 10% and the similarity coefficient 2 shall not exceed 5% <i>Recommendations:</i> ➤ Using an international expert in commission for PhD study and always translate doctoral thesis into English. In this way similarity on English and translation part of the thesis will be reduced to the minimum. ➤ 	<p>The indicator is fulfilled.</p>
5	A.2.1.1	<p><i>The IOSUD/the doctoral school(s) present proof of possessing or having</i></p>	<ul style="list-style-type: none"> ➤ The doctoral school has the necessary research infrastructure to support the development of activities specific to doctoral studies. The "Ferdinand I" Military Technical Academy has laboratories, specialized rooms, centers of 	<p>The indicator is fulfilled.</p>

		<p><i>rented adequate spaces for research activity specific to doctoral studies (laboratories, experimental fields, research stations, etc.)</i></p>	<p>excellence that are equipped with the equipment and technical means necessary to carry out the educational process for undergraduate, master's and doctoral studies.</p> <ul style="list-style-type: none"> ➤ Research centers are: <ul style="list-style-type: none"> • CENTER OF EXCELLENCE IN ROBOTICS AND AUTONOMOUS SYSTEMS (CERAS) • CENTER OF EXCELLENCE IN INTEGRATED ARMS AND ENGINEERING SYSTEMS (CESIAG) • ENERGY AND BALLISTICS AND CBRN DEFENSE LABORATORY (LEBS-CBRN) LABORATORY • LABORATORY OF CONSTRUCTION MATERIALS AND SUBSTATIC, • DYNAMIC AND SHOCK ELEMENTS LOADS ➤ The educational and research spaces are located in buildings that are part of the Ministry of National Defense patrimony, assigned for this purpose to the "Ferdinand I" Military Technical Academy. ➤ The material base of the "Ferdinand I" Military Technical Academy fulfills the requirements of the educational process for all university study programs, as well as of the university scientific research at the level of the exigencies of the university technical education. ➤ Ferdinand I" Military Technical Academy has laboratories, specialized rooms, centers of excellence that are equipped with equipment and technical means necessary for the educational process for undergraduate, master's and doctoral studies ➤ Also, doctoral students have access to the research and testing laboratories of the Research Agency for Military Technology and Technologies (ACTTM) based on the agreement concluded with this institution. ➤ Students have online access to international databases and electronic scientific resources (databases/platforms of full-text scientific journals and bibliographic and bibliometric databases) 	
	<p>A.2.1.2</p>	<p><i>The IOSUD/doctoral school(s) proves that it is/are concerned with permanent renewal of the research infrastructure to provide doctoral</i></p>	<ul style="list-style-type: none"> ➤ FIMTA can provide financial support to doctoral students to carry out research internships in the country or abroad by concluding agreements or institutional partnerships, doctoral research in co-supervision, exchanges of doctoral students and professors with internationally recognized universities, participation in international 	<p><i>The indicator is fulfilled.</i></p>

		<p>students access to updated research resources, by applying to various funding competitions and using own university resources for acquiring new research infrastructure.</p>	<p>consortia aimed at including doctoral research topics in international scientific projects.</p> <ul style="list-style-type: none"> ➤ The list of theses carried out by FIMTA in collaboration with other universities in the country or abroad is presented at https://mta.ro/wp-content/uploads/2019/08/Teze-in-cotutela.pdf. ➤ There are 14 Universities on the list of collaboration institutions. ➤ 	
6	A.2.1.3.	<p>The IOSUD/doctoral school(s) proves that it is/are concerned with the permanent renewal of the research infrastructure to provide doctoral students access to updated research resources, by applying to various funding competitions and using their own university resources for acquiring new research infrastructure.</p>	<ul style="list-style-type: none"> ➤ The doctoral school (s) has/ have collaboration agreements concluded with higher education institutions, research institutes, research networks for the exploitation in partnership of various research infrastructures and publicly presents its offer of research services through a platform profile. ➤ The list of theses carried out by FIMTA in collaboration with other universities in the country or abroad: <ul style="list-style-type: none"> • Polytechnic University of Bucharest • Grenoble Polytechnic Institute France • “Carol Davila” University of Medicine and Pharmacy • Royal Military Academy Bruxelles • University of West Brittany • The National Engineering School of Brest • Grenoble Alpes University ➤ The academy has a modern library that provides access to the shelf and the possibility of computerized information through the online electronic catalog. The library has a rich book fund, corresponding to the documentation needs for all doctoral fields in IOSUD-FIMTA and the study programs carried out. This book collection is constantly updated and enriched and is complemented by subscriptions to scientific publications, doctoral theses and special collections. ➤ A modern, efficient and highly appreciated facility is the access to prestigious databases and information: ScienceDirect (Freedom Collection), Springerlink - Journals, ProQuest Central, IEEE IEL, Forest Science Database, Thomson ISI - Web of Science, Thomson ISI - Journal Citation Reports, Thomson ISI - Derwent Innovation Index, Scopus (provided through the ANELiS Plus project). ➤ 	<p>The indicator is fulfilled.</p>
7	*A.3.1.1.	<p>The share of Doctoral advisors coordinating simultaneously more than 8 doctoral</p>	<ul style="list-style-type: none"> ➤ Within the doctoral studies programs of the “Ferdinand I” Military Technical Academy 22 doctoral supervisors work, of which 7 full professors and 15 associate professors, who 	<p>The indicator is fulfilled.</p>

		<p>students but not more than 12 during their doctoral studies⁷ does not exceed 20%.</p>	<p>coordinate the doctoral training activity of doctoral students in different stages of training.</p> <ul style="list-style-type: none"> ➤ Thus, the situation of doctoral supervisors who simultaneously coordinate more than 8 doctoral students but not more than 12 who are in the period of doctoral studies (3 or 4 years to which are added the legally granted extension periods) does not exceed 20%. ➤ Four doctoral advisor had 10 to 11 doctoral students during doctoral study. <p style="text-align: center;">Recommendations:</p> <ul style="list-style-type: none"> ➤ In next period fix number of doctoral advisors. 	
8	A.3.1.2.	<p>At least 50% of all teaching/research staff involved in teaching/research activities related to training programs for advanced university studies or in individual research/art creation programs have a full-time employment contract for an indefinite period with the IOSUD.</p>	<ul style="list-style-type: none"> ➤ In the Doctoral School of FIMTA, the teaching activities related to a doctoral studies program are provided by tenured teachers and researchers from the institution. ➤ PhD supervisors should guide doctoral topics in accordance with the priority research areas of the national defense system, public order and national security, by using advanced principles and methods for explaining and interpreting from multiple perspectives, theoretical situations / problems and new and complex practices specific to the field. ➤ For students enrolled in the 2015-2016 academic year, teaching activities, for advanced university study preparation programs and in individual scientific research programs, are coordinated by 43 full-time professors and 11 associate professors. ➤ For students enrolled in the 2016-2017 academic year, the teaching activities for advanced university study programs and individual scientific research programs are coordinated by 28 tenured teachers and 16 associate teachers. ➤ For students enrolled in the 2017-2018 academic year, the teaching activities for advanced university study programs and individual scientific research programs are coordinated by 27 tenured teachers and 13 associate teachers. ➤ For students enrolled in the 2018-2019 academic year, the teaching activities for advanced university study programs and individual scientific research programs are coordinated by 38 tenured teachers and 12 associate teachers. ➤ For students enrolled in the 2019-2020 academic year, the teaching activities for advanced university study programs and individual 	<p>The indicator is fulfilled</p>

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

			<p>scientific research programs are coordinated by 32 tenured teachers and 9 associate teachers.</p> <p>➤</p>	
9	*B.1.1.1.	<p><i>Admission to doctoral study programs is based on selection criteria including: previous academic, research and professional performance, their interest for scientific or arts/sports research, publications in the domain and a proposal for a research subject. Interviewing the candidate is compulsory, as part of the admission procedure.</i></p>	<p>➤ Within Ferdinand I Military Technical Academy vacancies for PhD entry examination are approved by the Minister of National Defense in line with the human resources policy pertaining to the Minister of National Defense. Only specialists in defense, public order and national security structures can apply for the budget-financed vacancies with full attendance or without full attendance.</p> <p>➤ The state-budget financed vacancies with full attendance and without full attendance are assigned to candidates who passed the entry examination by the Doctoral School Council, taking into account the number of vacancies, candidates' capabilities and the relevance of the research topics proposed by PhD supervisors for the Army and defense industry.</p> <p>➤</p>	<p>The indicator is fulfilled.</p>
10	B.1.1.2.	<p><i>The IOSUD/doctoral school(s) have a policy for stimulating enrollment of doctoral students coming from disadvantaged social environments, by allocating reserved positions in the admission procedure and/or granting special scholarships, as well as organising support programs to prevent drop-outs.</i></p>	<p>➤ "Ferdinand I" Military Technical Academy enables full access to PhD training for all social categories established by the Minister of National Defense, given its specificity as military higher education institution.</p> <p>➤ According to the decision of the Academic Senate, some measures have been established to support PhD students who can benefit of tuition fee discount or payment by installment.</p>	<p>The indicator is fulfilled.</p>
11	B.2.1.1.	<p><i>The training program based on advanced academic studies includes at least 3 disciplines relevant to the scientific research training of doctoral students; at least one of these disciplines is intended to study in-depth the research methodology and/or the statistical data processing.</i></p>	<p>➤ The training program based on advanced academic studies in the Doctoral School of "Ferdinand I" military Technical Academy is suitable for improving the research skills of PhD students and strengthen ethical behaviour in science.</p> <p>➤ Programs are focused on an active learning model that enables PhD students to acquire the necessary skills for the PhD academic level.</p> <p>➤ In this sense, the training program of the doctoral school is a synthesis of fundamental disciplines, specialist courses and electives, being based on the tradition of the doctoral school in the academy, on the the novelty and complexity of the disciplines taught by tenured professors, whose skills are reflected in their résumés, lists of works and discipline descriptions.</p>	<p>The indicator is fulfilled.</p>

			<ul style="list-style-type: none"> ➤ For this purpose, the training module based on advanced academic studies includes for semester I of the first year between 3 and 5 disciplines established depending on the PhD field, that cumulate an aggregate of 30 transferable credits. ➤ 	
12	B.2.1.2.	<i>At least one discipline is dedicated to Ethics and Intellectual Property in scientific research or there are well-defined topics on these subjects within a discipline taught in the doctoral program.</i>	<ul style="list-style-type: none"> ➤ According to Order of Ministry of National Education no. 3131/2018, the training program based on advanced university studies also includes a discipline devoted to ethics in scientific research and intellectual property: "Ethics and academic integrity" (1hour/course; 3ECTS) ➤ 	The indicator is fulfilled.
13	B.2.1.3.	<i>The IOSUD has mechanisms to ensure that the academic training program based on advanced university studies addresses "the learning outcomes", specifying the knowledge, skills, responsibility and autonomy that doctoral students should acquire after completing each discipline or through the research activities⁸</i>	<ul style="list-style-type: none"> ➤ The training program of the doctoral school contains a series of lectures with adequate scientific content, updated in line with the state-of-the art. The feedback of PhD students is very important in improving the educational process of the Doctoral School. ➤ The training program based on advanced university studies is endorsed by CSD and validated by CSUD. Also, the discipline descriptions (which indicate the specific skills required for each discipline) the training program for PhD students is based on are endorsed by CSD and approved by the director of the Doctoral School. ➤ Within the training program based on advanced academic studies, PhD students go through a training module for specialist skills and a training module for general skills. ➤ Within the individual scientific research program (years II-III), the supervisor guides the PhD student to defend a number of at least three papers (research reports) complying with his doctoral thesis. The supervision committee examines the PhD students' tests and research reports. ➤ 	The indicator is fulfilled.
14	B.3.1.1.	<i>For the doctoral school there are in place mechanisms for valorification of the results of doctoral studies in accordance with the specificity of the particular domain</i>	<ul style="list-style-type: none"> ➤ The teaching staff and PhD students carry out scientific research activity provided in the Annual Research and Development Plan of "Ferdinand I" Military Technical Academy and is structured as follows: <ul style="list-style-type: none"> • Research and development works financed within the National Plan 	The indicator is fulfilled.

⁸ Or by what the graduate should know, understand and to be able to do, according to the provisions of the Methodology regarding inscription and registration of higher education qualifications in the the National Register of Qualifications in Higher Education (RNCIS) approved by the Order No.3475/2017 with subsequent amendments and additions.

		<p>(i.e. technological transfer, products, patents in the case of exact sciences; products and services for social sciences and humanities; festivals, contests, recitals, sports competitions; cultural-arts orders in the vocational domain; presentations at national and international conferences, publication of research results in national and international publications, engaging doctoral students in writing research-development projects etc.)</p>	<p>for Research, Development and Innovation</p> <ul style="list-style-type: none"> • Research-development works included in the Sectorial Research-Development Plan of the Ministry of National Defence • Research-development works that are carried out on the basis of scientific research contracts concluded with economic agents in Romania and abroad; • Projects financed from European funds. In 2016, the National Research-Development Institute for Materials Physics, the Polytechnic University of Bucharest and "Ferdinand I" Military Technical Academy, filed an Application for "Microwave antenna with resonators from different dielectric materials" patent. • PhD students of the Doctoral School participate in research studies within some projects whose results are valued both in the military and civilian environment. <p>➤ The institution periodically publishes, due to an editorial board made up of specialists with highly-qualified scientific teaching activity, the following journals:</p> <ul style="list-style-type: none"> • JOURNAL OF MILITARY TECHNOLOGY - (https://jmltechnol.mta.ro/); • JOURNAL OF PHILOLOGY AND INTERCULTURAL COMMUNICATION - (https://jpic.mta.ro/). <p>➤ Among the numerous scientific events run and held within "Ferdinand I" Military Technical Academy (international conferences, scientific symposia for teachers and students alike), we must mention the events run periodically as follows:</p> <ul style="list-style-type: none"> • Scientific communication session with international participation "MODERN TECHNOLOGIES IN THE XXI CENTURY" (32 editions) – run every two years. • The scientific conference COMMUNICATIONS run with the Polytechnic University of Bucharest, chaired by the International Institute of Electrical and Electronic Engineering – run every 2 years - (https://comms.ro/); 	
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			<ul style="list-style-type: none"> • The scientific conference SEC-IT & C (International Conference on Security for Information Technology and Communications) run with the Academy of Economic Studies in Bucharest, -run annually- (https://sites.google.com/view/seci tc/); • The annual session of the Student International Scientific Conferences (https://www.mta.ro/international/cerc-ro/); • Military Culture and War Experience (https://mcwe2020mta.wixsite.com/website) • The dimension of internationalization through bilateral cooperation between Rannis The Icelandic Center for Research, Reykjavik and Military Technical Academy, 19th May 2017 (http://www.mta.ro/dicisro/index.html). - 7th International Conference Computers and Artificial Intelligence, ECAI 2015. 	
15	B.4.1.1.	<i>At the level of IOSUD, theses non-validated, at the level of General Council of the National Council for Attestation of University Degrees, Diplomas and Certificates (CNADTCU), without the right of further amendments and re-organizing the process of public defending, is not exceeding 5% in the last 5 years.</i>	<ul style="list-style-type: none"> ➤ The quality of university study programs, within the fields where there are PhD studies, is based on content, scientific level and topicality. They have been worked out to be coherent and compatible with similar programs in Romania and in the European Union ➤ In IOSUS-FIMTA, in the period 2015-2020 a number of 76 PhD theses were completed, as follows: <ul style="list-style-type: none"> • 15 PhD theses in the field of “Electronic engineering, telecommunications and information technologies”; • 10 PhD theses in the field of “Computers and information technology • 37 PhD theses in the field of “Mechanical Engineering”; • 2 PhD theses in the field of “Electrical Engineering”; • 5 PhD theses in the field of “Civil Engineering and installations”; • 2 PhD theses in the field of “Industrial Engineering”. 	The indicator is fulfilled.

16	C.1.1.1.	<p><i>The IOSUD shall demonstrate the continuous development of the evaluation process and its internal quality assurance following a procedure developed and applied at the level of the doctoral school(s), the following assessed criteria being mandatory:</i></p> <p><i>(a) the scientific work of Doctoral advisors;</i></p> <p><i>(b) the infrastructure and logistics necessary to carry out the research activity;</i></p> <p><i>(c) the procedures and subsequent rules based on which doctoral studies are organized;</i></p> <p><i>d) the academic and social services (including participation in various events, publication of papers, etc.) and counseling made available to doctoral students.</i></p>	<ul style="list-style-type: none"> ➤ The development of quality culture in education is promoted at the level of top management by "Quality policy statement" of the Rector of ATMFI and, "Management commitment", Documents with a strong programmatic and mobilizing character for the entire staff of the institution. ➤ The reference chosen for the quality management system in ATMFI is SR EN ISO 9001/2015. The Vice-Rectors and the General Administrative Director lead and are responsible for the design, implementation, maintenance and improvement of the quality management system (SMQ) in the sectors for which they are responsible. ➤ Commission for Quality Assessment and Assurance in ATMFI - CEAQ- is a collective working body of ATMFI composed of representatives of teachers, students, non-teaching staff and beneficiaries (employers). CEAQ implements ATMFI Senate decision on quality assurance and elaborates Annual report on quality assurance, identifies, analyzes and proposes solutions and decisions regarding SMQ. ➤ The Quality Assurance Department - DAQ is a functional support structure for SMQ at the ATMFI level containing the minimum human resources necessary for the design, implementation and support of SMQ. ➤ From the content of the management commitment and of the quality policy statement, the main components of the university's quality policy can be deduced: <ul style="list-style-type: none"> • meeting the requirements of employers and obtaining satisfaction their through competence and efficiency - as a fundamental objective; • continuous improvement of educational processes - as a fundamental feature of the quality management system in the "Ferdinand I" Military Technical Academy; • fulfillment of educational missions, scientific research and activities related, taking into account the requirements, needs and expectations of employers; • developing the culture of the organization oriented towards continuous improvement of management and services, as well as the effectiveness of the management system; 	<p>The indicator is fulfilled.</p>
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			<ul style="list-style-type: none"> • the constant search for ways to improve the quality of services, the conditions of work and overall performance at the ATMFI level; • permanent analysis of the management policy in the field of quality, to be adapted to the implicit and explicit requirements of employers. <p>➤ The internal evaluation procedures, previously-mentioned, are to be worked out by the designated structures (CSD, CSUD, respectively), and will be subsequently looked into to be endorsed by The Trustee Committee and the Academic Senate of FIMTA. The internal evaluation processes are carried out in accordance with unbiased principles and transparency, the evaluation procedures (including the criteria) and the evaluation results being brought into bold relief to the Doctoral School members (PhD supervisors, PhD students).</p> <p>➤ The Commission for evaluation and quality assurance, the Department for quality assurance of ATMFI, as well as the other structures, at the level of faculties, departments and services continuously promote an improvement of the educational quality standards by modernizing and applying the procedures and regulations necessary for a good development. of the educational process in the institution.</p>	
17	C.1.1.2.	<i>Students' associations and, according to the case, representatives of students organise elections in the community of doctoral students, for positions in the CSUD, by universal vote, direct and secret, all doctoral students having the right of electing or being elected.</i>	<p>➤ The Students' Union of FIMTA is designated to run and conduct elections for student representatives in the leading university structures of the academy, faculties and Doctoral School.</p> <p style="text-align: center;">-</p>	<i>The indicator is fulfilled.</i>
18	C.1.1.3.	<i>Students' associations and, according to the case, representatives of students organise elections in the community of doctoral students at the level of each doctoral school,</i>	<p>➤ Doctoral students elect, among themselves, by universal, direct and secret ballot, all doctoral students having the right to elect and be elected, representatives in the Council of Doctoral Studies.</p> <p>➤ The mandate of the representatives in the Council of Doctoral Studies ends at the moment of the public defense of the thesis or the end of the mandate</p>	<i>The indicator is fulfilled.</i>

		for positions in the councils of doctoral schools, by universal vote, direct and secret, all doctoral students having the right of electing or being elected.		
19	*C.1.1.4.	Following the internal evaluation, IOSUD and the doctoral schools draft strategies and policies aiming to eliminate the identified deficiencies and to stimulate scientific and academic performance of IOSUD.	<ul style="list-style-type: none"> ➤ Every academic year, the CSUD director works out an operational plan for PhD training (https://mta.ro/wp-content/uploads/2021/02/PLAN-OPER-ATM-2020-2021-DOCTORAT min.pdf) devoted to the current approaches to develop the educational offer for the national defense and security system, measures for the improvement of the PhD study program, improvement of the formative-educational process, national and international visibility and acknowledgement, new proposals and trends for PhD studies. ➤ 	The indicator is fulfilled.
20	C.2.1.1.	The IOSUD publishes on the website of the organizing institution, in compliance with the general regulations on data protection, information such as: (a) the IOSUD/Doctoral School regulation; (b) the admission regulation; (c) the doctoral studies contract; (d) the study completion regulation including the procedure for the public presentation of the thesis; (e) the content of the training study program based on advanced academic studies; (f) the academic and scientific profile, thematic areas/research themes of the Doctoral advisors within the domain, as well as	<ul style="list-style-type: none"> ➤ Regulation of the Doctoral School is based on the following documents: <ul style="list-style-type: none"> • The national education law no. 1/2011; • Government Decision no. 681/2011 regarding the approvalCode of University Studies of doctorate, hereinafter referred to as Code; • Government Decision no. 134/10.03.2016 for modification and completioncODE doctoral studies, approved by Government Decision no. 681/2011; • Government Decision no. 264/2007 on the organization and functioning of the Academy Military Techniques; • University charter of the Military Technical Academy • Regulations for the organization and operation of doctoral studies called in continuation ATM-Doctoral Regulations. <p style="text-align: center;"><i>Recommendations:</i></p> ➤ More PhD and postdoctoral PhD study of Electrical Engineering based on English language. 	The indicator is fulfilled.

		<p><i>their institutional contact data;</i></p> <p><i>(g) the list of doctoral students within the domain with necessary information (year of registration; Advisor);</i></p> <p><i>(h) information on the standards for developing the doctoral thesis;</i></p> <p><i>(i) information on the opportunities for doctoral students aiming to attend conferences, to publish articles, awarding scholarships, etc.</i></p> <p><i>(j) links to the doctoral theses's summaries to be publicly presented and the date, time, place where they will be presented; this information will be communicated at least twenty days before the presentation.</i></p>		
21	C.2.2.1.	<p><i>All doctoral students have free access to one platform providing academic databases relevant to the doctoral studies domain of the their thesis.</i></p>	<p>➤ All PhD students have open access to the ANELIS+ platform with academically relevant databases for particular PhD fields, including Web of Science. Moreover, Military Technical Academy, in collaboration with the American Society of Mechanical Engineering (ASME) also announces open access to American Society of Mechanical Engineering (ASME) database, a prestigious scientific association that publishes 29 top scientific reviews and approximately 160 scientific monographs covering disciplines such as engineering, applied mechanics, engineering and industrial management, mechatronics, transport industries, automobile production, bioengineering, design, production, energy, standards and certifications, technology and society, career, education, etc. FIMTA library provides the required bibliography for students to study, with the specification that the available titles are supplemented every year.</p> <p>➤ The general objectives of the Anelis Plus Project are:</p> <ul style="list-style-type: none"> • Ensuring access to electronic documentary information resources through the acquisition 	<p><i>The indicator is fulfilled.</i></p>

			<p>of fulltext databases / platforms and bibliographic and bibliometric databases.</p> <ul style="list-style-type: none"> • Creating a virtual campus, to allow the scientific community and the Romanian educational access online resources and deposit not tert level documents (national repository) that will be developed within the project, both through the acquisition of archives, and the contribution of scientific publications of the Romanian academic community. • Promoting, at national level, the initiative to develop an open access system to scientific publications; creating links with the Romanian publishing platform SCIPIO and with the open access institutional repositories hosted by Romanian universities and libraries. • Ensuring mobile access to both international publications and online databases, as well as to the national document repository. <p>➤ Association of Universities, Research-Development Institutes and Central University Libraries in Romania - ANELIS PLUS supports the Romanian scientific community through the project "National Electronic Access to Scientific Literature to Support the Research and Education System in Romania - ANELIS PLUS 2020". On the project website, http://anelisplus2020.anelisplus.ro/, and on the Association's age, http://www.anelisplus.ro/, you can find the resources subscribed by the project for the institution in which you carry out your activity.</p> <p>➤</p>	
22	C.2.2.2.	<i>Each doctoral student shall have access, upon request, to an electronic system for verifying the degree of similarity with other existing scientific or artistic works.</i>	<p>➤ PhD students have access, upon request and with the consent of their PhD supervisor, to the software for verifying the degree of similarity existing in FIMTA. All the elaborated PhD theses are verified through this software before being defended in front of the supervision committee. The software is acknowledged by CNACTDCU (sistemantiplagiat.ro).</p>	<i>The indicator is fulfilled.</i>
23	C.2.2.3.	<i>All doctoral students have access to scientific research laboratories or other facilities depending on</i>	<p>➤ IOSUD/The Doctoral School has a research infrastructure that supports the development of activities specific to PhD studies. FIMTA has laboratories, specialist rooms, centers of excellence that are supplied with equipment and</p>	<i>The indicator is fulfilled.</i>

		<p><i>the specific domain/domains within the Doctoral School, according to internal order procedures.</i></p>	<p>technical means necessary to carry out the educational process for undergraduate, master's and PhD studies.</p> <ul style="list-style-type: none"> • Center of Excellence for "Integrated Weapons and Engineering Systems (CESIAG)" (Security Laboratory for extreme loads of construction and engineering structures; Laboratory of Integrated Weapons and Defense Systems CBRN); • Center of Excellence for "Self-Propelled Systems and Technologies for Defense and Security (CESATAS)" (Laboratory of Aerospace Systems and Technologies; Laboratory of Self-propelled Systems); • Center of Excellence for "Advanced Cyber Security Technologies (CETASC)" (Cyber Warfare Laboratory, Computer Network Security Laboratory, Computer Applications Security Laboratory); • Center of Excellence for "Communications and Information Technology (CECTI)" (Laboratory of Integrated Communication Systems; Laboratory of Advanced Technologies in Radio communications); • Center of Excellence for "Robotics and Autonomous Systems (CERAS)" (Robotics Laboratory; Laboratory of Autonomous Systems); • GEOINT Center -Technological Development Center. <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> ➤ Build virtual joint access laboratory for better online activities of PhD students. This means virtualize real laboratories and give access to students to training in virtual space, before starting real laboratory work. 	
<p>24</p>	<p>*C.3.1.1.</p>	<p><i>IOSUD, for every doctoral school, has concluded mobility agreements with universities abroad, with research institutes, with companies working in the field of study,</i></p>	<ul style="list-style-type: none"> ➤ Coordination at European level, within the strategic partnership project "European Common Technical Semester for Defense and Security"(2020-2022) funded by Erasmus + program, of a consortium of military academies consisting of the Military University of Technology in Warsaw (Poland), the National Military University "Vasilevski", the Faculty of Shumen (Bulgaria), the French Air Force Academy in Salon de Provence (France) and the 	<p><i>The indicator is fulfilled.</i></p>

		<p>aimed at the mobility of doctoral students and academic staff (e.g., ERASMUS agreements for the doctoral studies). At least 35% of the doctoral students have completed a training course abroad or other mobility forms such as attending international scientific conferences. IOSUD drafts and applies policies and measures aiming at increasing the number of doctoral students participating at mobility periods abroad, up to at least 20%, which is the target at the level of the European Higher Education Area.</p>	<p>Hellenic Air Force Academy from Athens (Greece), to which are added other EU military academies with concerns in the field of military technical education, with the aim of organizing for the first time a joint international technical military semester at EU level;</p> <ul style="list-style-type: none"> ➤ Coordination at European level, under the auspices Erasmus Military initiative and under the aegis European Security and Defense College, a working group composed of internationalization specialists, representatives of military academies with a technical profile, aiming at the development of new educational projects for the development of the internationalization of military technical education at EU level (LoD13 within the Military Erasmus); ➤ Teachers and students of “Ferdinand I” Military Technical Academy (FIMTA), including PhD supervisors and PhD students, are actively involved in the interuniversity collaboration of FIMTA with over 50 military and civilian higher education institutions, in France, Great Britain, Portugal, Italy, Spain, Holland, Poland the Czech Republic, Hungary, Bulgaria, etc. A number of 20 PhD students completed ERASMUS+ mobilities <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> ➤ The institution must increase the number of PhD students in Erasmus projects incoming and outgoing abroad. Internationalization is a key to education success in the future. 	
25	C.3.1.2.	<p>IOSUD supports, including providing financial support, to the organization of doctoral studies in international co-tutelage or invitation of leading experts to deliver courses/lectures for doctoral students.</p>	<ul style="list-style-type: none"> ➤ In addition to the co-supervised PhD agreements conducted, FIMTA invited various experienced teachers and scientific researchers (Annex no. C3-08) to carry out working visits, teaching activities or to participate at workshops or conferences run within FIMTA. All these events were attended by FIMTA PhD students. There are 37 partners Universities from 12 EU countries from 2015. To 2021. Years. ➤ Thus, in the period 2015-2020, within the Erasmus+ program, an aggregate of 62 teachers from EU universities carried out teaching or other mobilities in FIMTA where PhD students participated in accordance with their research field and the type of activity run. Moreover, during the same period, an aggregate of 62 activities (working visits, NATO/ STO working groups, workshops, conferences, seminars and other activities) were run in FIMTA and attended by teachers, military personnel and internationally-acknowledged scientific research personnel. These activities were also attended by FIMTA teachers and PhD students. 	<p>The indicator is fulfilled.</p>

			<ul style="list-style-type: none"> ➤ Participation in an international competition organized under the Erasmus program to obtain funding for a strategic partnership project + in a consortium of military academies in Italy, Poland and Bulgaria, in the field of developing digital skills to improve internationalization and the quality of the educational process in technical universities EU military; ➤ Organization in ATMs, under the auspices Erasmus Military initiative and European Security and Defense College of a summer school in the field Cyber security, robotics and autonomous systems, lasting one week, in collaboration with the Polytechnic University of Bucharest, with teaching in English, for civilian and military personnel from the country and abroad; ➤ Given the specifics of our institution and our country's membership in NATO and the EU, in the next period we will seek to increase the participation of the institution's specialists in various initiatives, groups or panels organized under the auspices of NATO and the EU. ➤ Increasing the number of foreign students carrying out study or internship mobility in ATMs and increasing the number of foreign teachers carrying out teaching or training activities in ATMs with: <ul style="list-style-type: none"> • supporting ATM teachers / departments / faculties to organize in ATM scientific events, working groups within NATO-STO or EU-EDA; • attracting financial funds from the Erasmus program as well as from other programs (EEA, scientific research projects, own funds, etc.) to finance one semester or shorter mobility of ATM students, as well as teaching mobility or training of ATM staff • identification of methods for rewarding and recognizing ATM teachers for the coordination of foreign students; • diversification of the educational offer of short-term modules with teaching in international languages for foreign students; • encouraging ATM students to participate together with other foreign students in the language teaching modules organized within the institution. 	
26	*C.3.1.3.	At least 10% of the doctoral theses of	<ul style="list-style-type: none"> ➤ Most of the 76 doctoral dissertations defended in the period 2015-2020 are in Romanian. The 	The indicator is fulfilled.

		<p>every doctoral schools of the IOSUD are drafted and/or submitted in an international foreign language or are organised in international co-tutelage.</p>	<p>increase in interest came when ATM included supervisors from foreign countries from EU universities. The reason for this is the higher citation of papers in English. Yet only 3 theses are written in English.</p> <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> ➤ It is necessary to fully meet this criterion in the coming period. 	
27	C.3.1.4.	<p>The internationalization of activities carried out during the doctoral studies is supported by IOSUD through concrete measures (e.g., by participating in educational fairs to attract international doctoral students; by including international experts in guidance committees or doctoral committees⁹ etc.).</p>	<ul style="list-style-type: none"> ➤ In the period 2016-2020, in order to increase its visibility and strengthen its international acknowledgement, "Ferdinand I" Military Technical Academy participated in various educational fairs to promote its educational offer and scientific research: ERACON 2016, ERACON 2017, ERACON 2018, ERACON 2019, EAIE 2017, EAIE 2018 and EAIE 2019. ➤ Each year from 2016 until 2019, FIMTA participated in the Erasmus Coordinators' International Conference (ERACON) ➤ The main objective of ERACON conferences is to promote the Erasmus program among EU and non-EU universities. ➤ Among all ERACON conferences where FIMTA participated with presentations and stands: ERACON 2016, Thessaloniki, Greece, 10th -14th May 2016; ERACON 2017, Maribor, Slovenia, 8th -14th May 2017, ERACON 2018, Murcia, Spain, 8th -12th May 2018, ERACON 2019, Paphos, Cyprus, 1st-5th May 2019. ➤ Among the EAIE conferences where FIMTA participated with presentations and stands, it is worth mentioning: EAIE 2017, Seville, Spain, 11th-16th September 2017, EAIE 2018, Geneva, Switzerland, 10th-16th September 2018, EAIE 2018, Helsinki, Finland, 24th-27th September 2019. 	<p>The indicator is fulfilled.</p>
28	C.4.1.1.	<p>IOSUD, applies the current provisions regulating ethics, deontology/academic integrity, respectively to academic freedom and has developed:</p> <ul style="list-style-type: none"> - policies based on prevention regarding possible violations of the Code of ethics and academic integrity, demonstrated by 	<ul style="list-style-type: none"> ➤ The code of ethics and professional ethics at the academy (https://www.mta.ro/wp-content/uploads/2019/02/codul-de-etica.pdf) includes moral principles, ethical norms and sanctions that make fundamental all the collaboration relations between students, PhD students, trainees and university teachers, scientific researchers, instructors, subunit commanders, auxiliary teaching staff, auxiliary research staff, administrative staff and staff from the command structures of the academy. ➤ The activity of the University Ethics Commission is mainly responsible for resolving the ethical situations resulting from complaints, notifications 	<p>The indicator is fulfilled.</p>

⁹ Doctoral studies are completed by presenting the doctoral thesis in public session in front of a committee whose members hear and judge the final public presentation of the thesis

		<p><i>public postioinings, studies, analyses or measures taken;</i></p> <p>- <i>practices and mechanisms for preventing fraud, from an institutional perspective as well as from the perspective of the doctoral students;</i></p> <p>- <i>practices for preventing possible fraud in academic activity, research or any other activity, including active measures for preventing and avoiding plagiarism of any kind, as well as promoting ethical and integrity/deontology principles or observing intellectual property norms, authors' rights and other related rights, among all members of the academic community;</i></p> <p>- <i>administrative instruments which allow applying effective and eliminatory sanctions; mechanisms and measures to assure equal opportunities and protection against intolerance and discrimination of any kind;</i></p>	<p>or self-notifications of the Commission as well as the assessment of the ethical climate in the Military Technical Academy "Ferdinand I".</p> <p>➤ In 2020, the Regulation of the University Ethics Commission of the "Ferdinand I" Military Technical Academy was elaborated, approved by the University Senate in the meeting of 27.03.2020. It establishes the manner of establishment and functioning of the University Ethics Commission within the institution taking into account the legislation in force (National Education Law no. 1/2011 with subsequent amendments and completions, Law no. 206/2004 on good conduct in scientific research, technological development and innovation, with subsequent amendments and completions, the Code of Ethical Conduct for Contract Military and Civilian Personnel from the Ministry of National Defense No. M94/2004 and the Code of Ethics and Professional Ethics of the Military Technical Academy "Ferdinand I").</p> <p>➤ During that period, there was only one situation which required the Commission to intervene. Thus, the Ministry of Education and Research sent to the Military Technical Academy "Ferdinand I" a memorial which indicates a number of possible violations of National Education Law no. 1/2011(with subsequent amendments and completions) and a Law no. 202/2002 on equal opportunities between women and men, committed by teachers and management from the Department of Computers and Cyber Security within the Faculty of Information Systems and Cyber Security of the institution, requesting the presentation of the point of view resulting from the analysis of the facts and circumstances reported.</p> <p>➤ The right to intellectual property is respected and protected in the academy, so that all those staff members who participated with public results in different stages of scientific research are mentioned and promoted in the spirit of professional honesty and merit acknowledgement.</p> <p>➤ Teachers and researchers must respect the copyright of the work they make use of in carrying out any intellectual study, by precisely quoting out any intellectual study, by precisely quoting out and/ or indicating the references mentioned.</p> <p>➤ In the academy are prohibited:</p> <ul style="list-style-type: none"> • the sale of scientific papers in order to forge the author of a diploma, dissertation, PhD thesis and other papers; • plagiarism • the entrustment by any author of the scientific products published to 	
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			<p>another person to be republished under another name than that of the author/ authors;</p> <ul style="list-style-type: none"> • the illegal appropriation of the copyright of any intellectual work in other situations that do not fall under the provisions referred to in (a) and (c); 49 out of 60. • the inclusion of false data in the files worked out for applying for contracts and grants, teaching and research positions, or employment. • the orientation of the undergraduates', master degree's students' and PhD students' research activity in order to obtain a material or non-patrimonial personal benefit by the guiding teacher; • any other form of intellectual fraud such as cheating in exams or competitions, falsification of research results, substitution of work or identity of the persons examined; • constraint of exam participation or pass by forcing students to purchase their academics' coursebooks or published work. 	
29	C.4.1.2.	<p><i>All intimations regarding suspicion of plagiarism related to doctoral theses have been analysed and resolved by the IOSUD within the time interval legally established for expressing in writing its position regarding the intimation received.</i></p>	<p>➤ IOSUD/ The PhD School did not get any notification regarding suspicions of plagiarism related to PhD theses.</p> <p>➤ The acquisition of methods, procedures, scientific and technological results, findings of scientific research conducted by another author is plagiarism, as well as the full or partial takeover of a material by another author, without indicating its source and presenting it as one's personal creation.</p> <p>➤ Misconduct in academic research implies (and is not limited to) fabrication, falsification, plagiarism or deception in proposing, carrying out or reporting results of research and deliberate, dangerous or negligent deviations from accepted practice in carrying out research. It includes failure to follow an agreed protocol if and when this failure results in unreasonable risk or harm to persons, the environment, and when it facilitates misconduct in research by collusion in, or concealment of, such actions by others. Misconduct also includes any plan or attempt to do any of these things. It does not include honest error or honest differences in interpretation or judgment in evaluating research methods or</p>	<p><i>The indicator is fulfilled.</i></p>

			<p>results, or misconduct unrelated to research processes.</p> <ul style="list-style-type: none"> ➤ Recommendations: ➤ The Chair of the Ethics Committee may invite internal or external experts who are not involved in the disputed matter and who are not members of the Committee to attend meetings. They may be heard or participate in discussions but have no vote. ➤ The European University Institute is committed to the provision of appropriate direction of research and supervision for researchers. Supervisors are expected to adhere to the Code of Practice for Doctoral Supervision at the EUI, which delineates the supervisory relationship, the assessment of research progress, and the procedures to resolve problems in the supervisory relationship. ➤ The Academic Departments should ensure that all researchers undertake appropriate training in research design, methodology, regulatory and ethics approvals and consents, equipment use, confidentiality, data management, record keeping, data protection and publication, the appropriate use of licensed research resources and respect for the intellectual property rights of third parties. 	
30	C.4.1.3.	<p><i>Annual Reports of the Ethics commission of the IOSUD contain information on the stage of solving each case of intimation or own-initiative intimation regarding violation of norms or ethical aspects relevant for university doctoral studies. description of the facts, the findings from the assessed institution's documents and the evaluation visit itself.</i></p>	<ul style="list-style-type: none"> ➤ At the academy level there is the University Ethics Committee which is appointed by the Board of Directors of "Ferdinand I Military Technical Academy" and approved by the rector of the institution. The committee members are people with professional prestige and moral authority. ➤ The activity of the Academic Ethics Committee is established based on the Regulation of the Academic Ethics Committee of "Ferdinand I Military Technical Academy" (Appendix no.C3-09). <p style="text-align: center;"><i>Recommendations:</i></p> <ul style="list-style-type: none"> ➤ The Ethics Committee will produce a report stating: the procedures under which the formal investigation was conducted; how and, where appropriate, from whom information was obtained; the findings of the committee and the basis for these; a summary of the views of the respondent; and a description of any recommendations made by the committee. ➤ The Ethics Committee may carry out: <ul style="list-style-type: none"> • a preliminary investigation to ascertain whether there is sufficient substance to the allegation as to warrant a more thorough investigation; 	<p><i>The indicator is fulfilled.</i></p>

			<ul style="list-style-type: none"> a formal inquiry which may include the consultation or involvement of external experts when needed. 	
31	C.4.1.4.	<i>The measures taken by IOSUD after the final decision of CNADTCU to withdraw the title of “doctor” following accusations of plagiarism have addressed all the aspects mentioned in CNADTCU’s decision and in the current legislation.</i>	➤ There were no such cases in IOSUD-FIMTA.	<i>The indicator is fulfilled.</i>
32	C.4.1.5.	<i>The measures aiming to prevent academic fraud in the doctoral studies, taken by IOSUD, could be:</i> a) <i>Suspension of the right to advise newly enrolled doctoral students, for a period of 3 years, in the case of doctoral advisors having coordinated a doctoral thesis with a definitive decision of withdrawal of the “doctor” title for plagiarism;</i> b) <i>Exclusion from the IOSUD of the doctoral advisor having coordinated at least two doctoral theses with definitive decisions of withdrawal of the “doctor” title for plagiarism;</i> c) <i>Suspension of the right to organize the admission process of new doctoral students in the Doctoral studies domain, for a period of 2 years, if in the respective domain a doctoral thesis has been finalized and defended with a</i>	➤ There were no such cases in IOSUD-FIMTA. -	<i>The indicator is fulfilled.</i>

		<i>definitive decision of withdrawal of the "doctor" title for plagiarism.</i>		
33	*C.4.1.6.	<i>The scientific reviewers members in the commissions for public defense of two or more doctoral theses with definitive decisions of withdrawal of the "doctor" title for plagiarism, have not been nominated in other commissions for public defence of doctoral theses for a period of at least 3 years.</i>	<ul style="list-style-type: none"> ➤ There were no such cases in IOSUD-FIMTA. 	<i>The indicator is fulfilled.</i>
34	C.4.1.7.	<i>IOSUD has a database open to the public containing all the doctoral theses defended in the institution beginning at least in 2016 in a format including the domain, author, doctoral advisor, title of the thesis and the thesis in electronic format (if there is an agreement of the author).</i>	<ul style="list-style-type: none"> ➤ IOSUD publishes, on https://mta.ro/teze-de-doctorat-sustinute, in compliance with the regulations in force regarding data protection, information that includes: the date of the PhD thesis defense, a soft copy of the PhD thesis summary in English and Romanian, PhD students' résumé. ➤ The PhD thesis can be found and consulted within the Library of "FERDINAND I" MILITARY TECHNICAL ACADEMY. 	<i>The indicator is fulfilled.</i>





VI. Conclusions and general recommendations

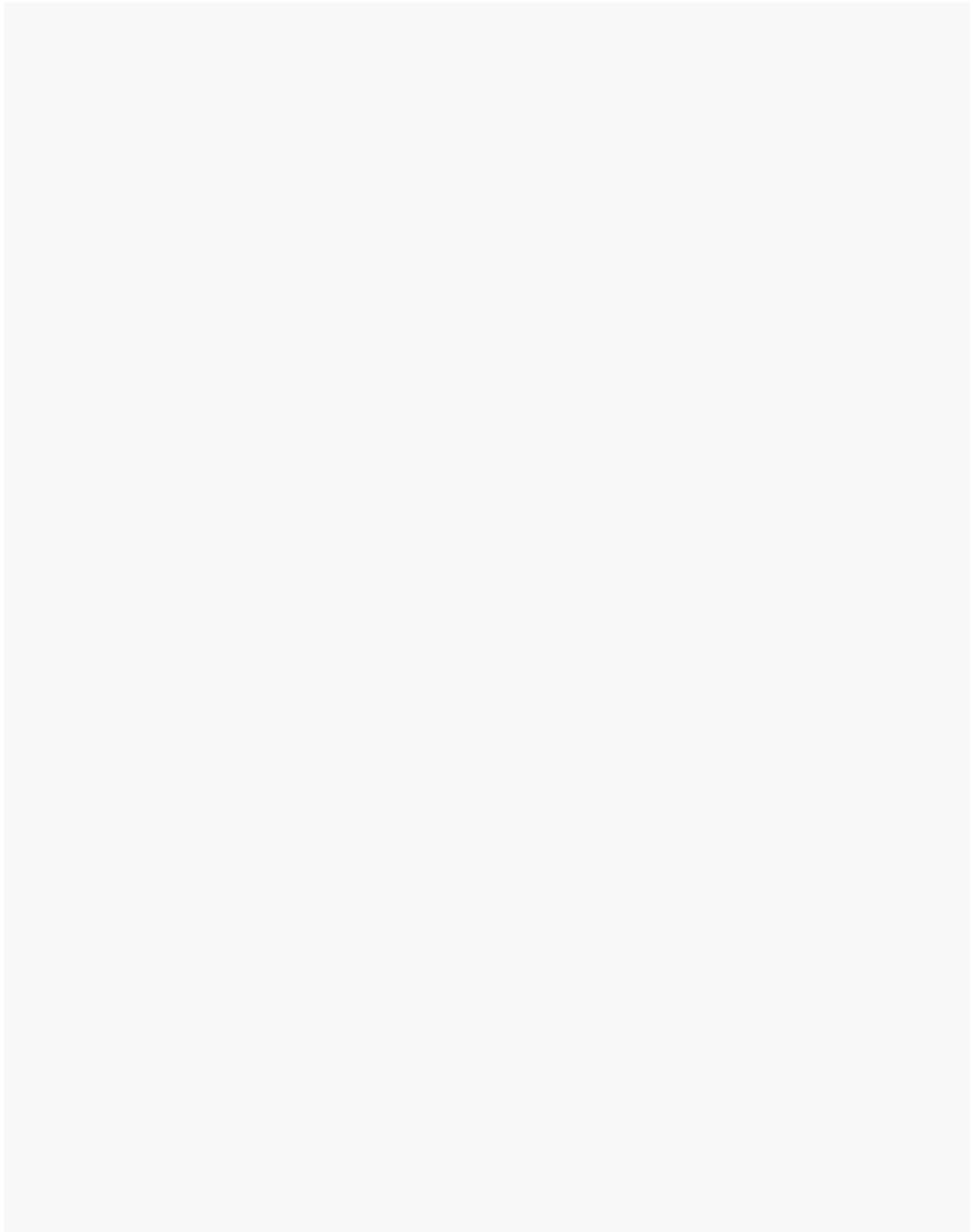
After full evaluation MILITARY TECHNICAL ACADEMY "Ferdinand I" Doctoral studies, documents and talking with professors, rectors, deans, students and after reading plans and programs, annexes, and all other documents, I have only one decision. MILITARY TECHNICAL ACADEMY "Ferdinand I" is an quality University. All 34 indicators are fulfilled. In the future, MILITARY TECHNICAL ACADEMY "Ferdinand I" needs more collaboration activities every year according to the Internationalization Doctoral Study and the quality of resources for this study. MILITARY TECHNICAL ACADEMY "Ferdinand I" must in the future period invest in internationaliyation of study, translating PhD thesis on English, also need more PhD Advisors

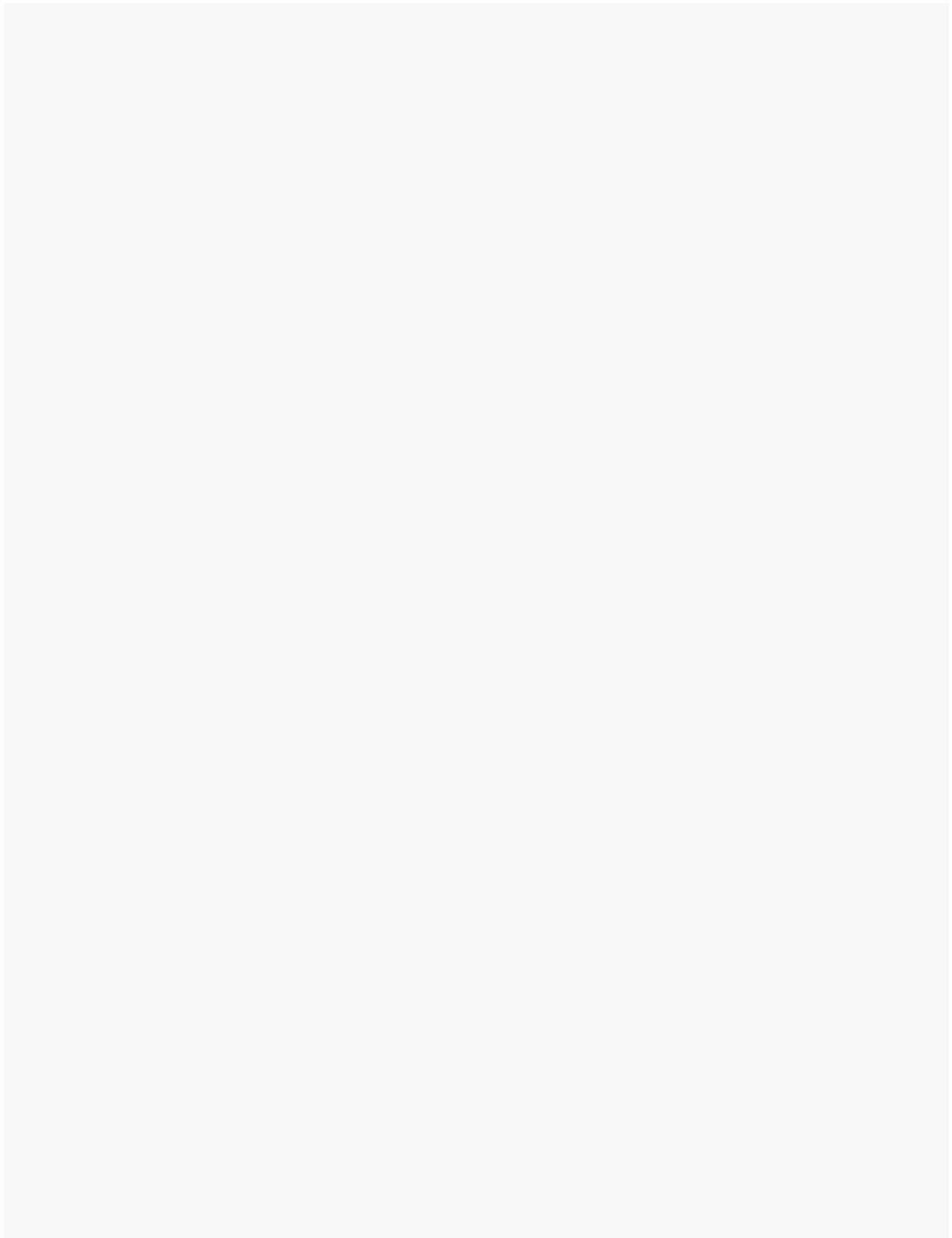
MILITARY TECHNICAL ACADEMY "Ferdinand I" had excellent doctoral studies and had more than enough professors, laboratories and other resources. MILITARY TECHNICAL ACADEMY "Ferdinand I" is evaluated that fulfilled or necessary indicators to establish Doctoral Studies.

Date: 22.10.2021



VII. Annexes







STRATEGIC PLAN OF THE MILITARY TECHNICAL ACADEMY "Ferdinand I"

FOR THE TERM OF 2020-2024

The academic year 2021-2022

- The operational plan for the development of the educational process in the academic year 2021-2022
- Operational plan for the development of scientific research in the academic year 2021-2022
- Operational plan for the development of interuniversity relations in the academic year 2021-2022
- The operational plan for continuous development and the relationship with students in the academic year 2021-2022
- Operational plan for the development of doctoral training in the academic year 2021-2022
- The operational plan for the digitization of the institution in the academic year 2021-2022
- REPORT OF THE UNIVERSITY ETHICS COMMISSION FROM THE "FERDINAND I" MILITARY TECHNICAL ACADEMY - The year 2020 -
- The activity of the University Ethics Commission is mainly responsible for resolving the ethical situations resulting from complaints, notifications, or self-notifications of the Commission as well as the assessment of the ethical climate in the Military Technical Academy "Ferdinand I".
- In 2020, the Regulation of the University Ethics Commission of the "Ferdinand I" Military Technical Academy was elaborated, approved by the University Senate in the meeting of 27.03.2020. It establishes the manner of establishment and functioning of the University Ethics Commission within the institution taking into account the legislation in force (National Education Law no. 1/2011 with subsequent amendments and completions, Law no. 206/2004 on good conduct in scientific research, technological development and innovation, with subsequent amendments and completions, the Code of Ethical Conduct for Contract Military and Civilian Personnel from the Ministry of National Defense No. M 94/2004 and the Code of Ethics and Professional Ethics of the Military Technical Academy "Ferdinand I").







About:

Journal title: **Journal of Military Technology**

Issuing organization: **The Military Technical Academy "Ferdinand I" of Bucharest, Romania**

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Print ISSN: **2601-6613**

ISSN-L: **2601-6613**

Number of issues: **two per year** (June and December)

Language: **English**



Description:

The Journal of Military Technology is an international scientific journal published by the Military Technical Academy "Ferdinand I" of Bucharest, Romania. The papers accepted to be published, following review by a distinguished scientific panel, present the state of the art results of the scientific research carried out in the Military Technical Academy "Ferdinand I", in universities and research centers both domestic and from abroad (France, the Czech Republic, USA, the Slovak Republic, China, Hungary, Bulgaria, the Netherlands, Poland, etc.). The Journal of Military Technology is a biannual, peer-reviewed scientific journal published in English. The topics of interest for the Journal of Military Technology include, not exclusively, the following:

- electronic engineering;
- communications;
- computer science;
- systems engineering;
- armament, missiles, and ammunition engineering;
- civil engineering;
- aerospace engineering;
- automotive engineering.

The publishing policy of the Journal of Military Technology encourages particularly the publishing of scientific papers that are focused on the applications in the military field.

Starting issue No.1/2018, the journal of Military Technical Academy "Ferdinand I", the altered sequel of the MTA Review, will come out as the Journal of Military Technology, under changed description..

ABOUT

- Journal title: **JOURNAL OF PHILOLOGY AND INTERCULTURAL COMMUNICATION**
- Issuing organization: **Department of Foreign Languages, Military Science and Management**
- Publisher: **Military Technical Academy Publishing House**
- Number of issues: **two per year (February and July)**
- Languages: **English, French, Romanian**
- **ISSN: 2558 – 8478**
- **ISSN-L: 2558 – 8478**
- **ISSN Online: 2558 – 9830**

- **Description:**

JPIC is a specialist plurilingual journal issued by the Department of Foreign Languages and Intercultural Communication of the Military Technical Academy. Launched in 2017 in online format, JPIC is a peer-reviewed, biannual international journal that sets out to bring together and promote innovative approaches in the following areas: literature, comparative literature, literature and civilisation, intercultural communication, cultural studies, linguistics, applied linguistics, second language acquisition, foreign language teaching methods and techniques, and translation studies. JPIC publishes scientific papers, review essays and book reviews, each issue consisting of either various contributions or contributions on particular topics of broad interest.









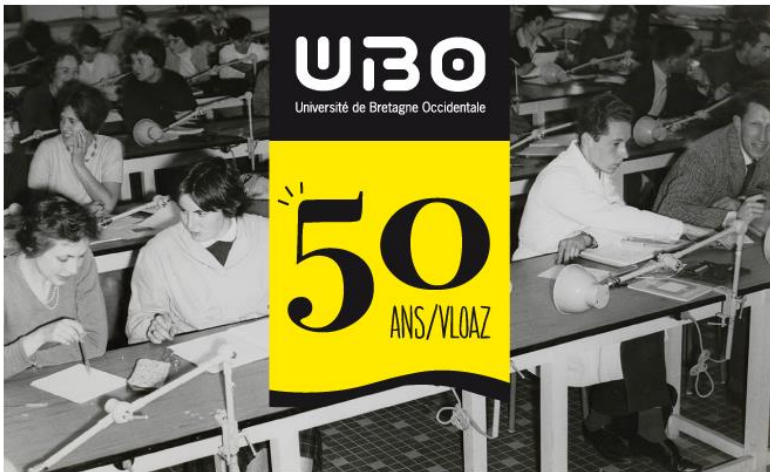
Web site of companies for all employers if is possible and graduates.

<http://www.tudor-tech.ch/>

The screenshot shows the Tudor Tech website homepage. At the top, there is a navigation bar with the Tudor Tech logo and menu items: HOME, PRODUCTS, SERVICES, TEAM, ABOUT, CONTACT, and language options (FR, DE, ES, CN). Below the navigation bar is a large banner image of a white airplane on a tarmac next to a green Tudor Tech truck. Underneath the banner is a 'PRODUCTS' section with the text: 'With Mircea Tudor Scan Tech, you have "A Safer View."' and 'Our company combines technological sophistication with safety expertise to deliver products and services that address the operational and security needs of governments, the airline industry, the cross-border logistics sector, and millions of passengers throughout the world.' Below this text are three product images with captions: 'TUDOR TECH AERIA X-RAY AIRCRAFT SCANNING', 'TUDOR TECH AERIA DV DUAL VIEW X-RAY AIRCRAFT SCANNING', and 'TUDOR TECH ML64 ROBOTIC SCANNING SYSTEM'.

<http://www.mbtelecom.ro/>

The screenshot shows the mbtelecom.ro website. The top navigation bar includes the mbt logo with the tagline 'i'mpossible', the Tudor Tech logo, and the text 'English'. Below the navigation bar are menu items: ACASĂ, COMPANIE, PRODUSE, SECURITATE DOMESTICĂ, DESCĂRCĂRI, PARTENERI, and CONTACT. The main content area features a large banner for 'ISNR INTERNATIONAL EXHIBITION FOR NATIONAL SECURITY & RESILIENCE' with the text 'INNOVATION @ ISNR ABU DHABI' and '6-8 MARCH 2018 | ADNEC, ABU DHABI'. Below the banner are four columns of content: 'ȘTIRI' (News) featuring 'ROBOSCAN 2M AERIA X-Ray Aircraft Scanning System' with a photo of the system and text about its award; 'GAMĂ DE PRODUSE' (Product Range) featuring 'ROBOSCAN - o gamă de sisteme de inspecție versatile, ușoare și telecomandate'; 'PROIECTE' (Projects) featuring 'Soluții integrate și personalizate pentru proiecte de siguranță națională și nu numai.'; and 'CERCETARE' (Research) featuring 'Inovarea ne ajută să aducem avantaje competitive produselor și serviciilor noastre și să ne concentrăm pe funcționalități și eficientizarea costurilor.' At the bottom of the page, there is a Windows taskbar and a weather widget showing '54°F Cloudy'.



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The banner features a dark blue background with a glowing globe and several circular icons representing different technology sectors: a car, a factory, a house, a mobile phone, a radio tower, and a person at a computer.

Together, we accelerate breakthroughs that anticipate, automate and advance the world.

AUTOMOTIVE

COMMUNICATION INFRASTRUCTURE

INDUSTRIAL

MOBILE

SMART CITY

SMART HOME



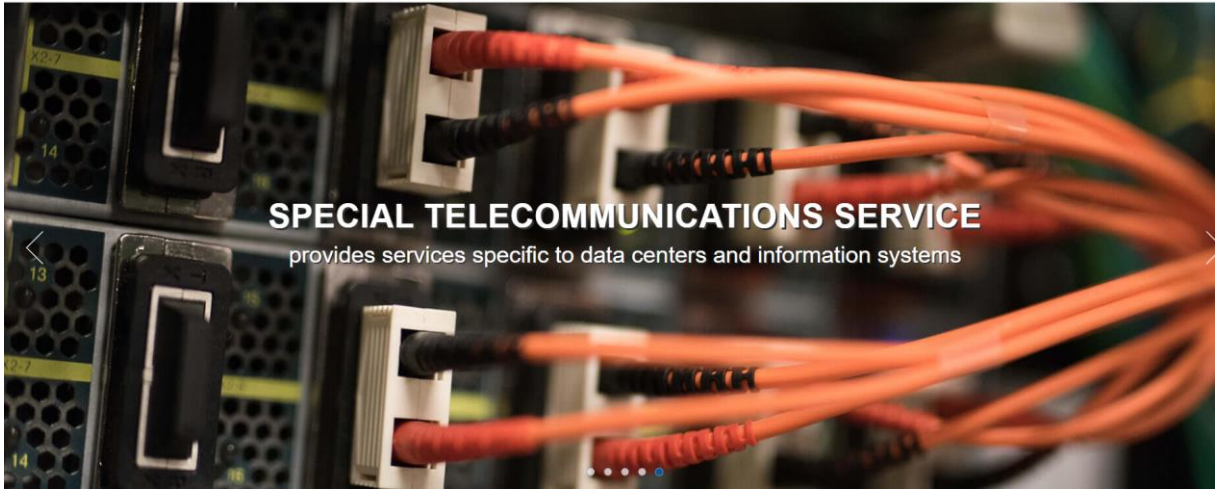
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