



الجمهورية الجزائرية الديمقراطية الشعبية
وزارة التعليم العالي والبحث العلمي

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**Didactics Repository for the Initial Training
of Doctoral Students**

2022-2023

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National Pedagogical Committee for DIDACTIC Subjects

Doctoral studies

Committee members

Full name	Quality	University
1. Mrs. BENHOUHOU Nabila	President	Higher Normal School of Bouzaréah
2. Mrs. MOUSSAOUI-BENGHERBIA Nassima	Expert	Blida 2 University
3. M. OUKACI Lounis	Expert	Constantine 2 University
4. Mrs. AMOROUAYACH Essafia	Expert	Alger 2 University
5. M. ABDESSALAM Khaled	Expert	Sétif 2 University
6. M. HOUCINI Mohamed	Expert	Constantine 2 University
7. Mrs. BENSEKAT Malika	Expert	University of Mostaganem
8. M. BRAIK Saadane	Expert	Naâma University Center
9. Mrs. GUENDOOUZ-BENAMAR Naima	Expert	Oran Higher Normal School

Preamble

Didactics is a research discipline that focuses on the surroundings of teaching: development of knowledge, development of content, research methodology (theoretical and methodological approaches), required progression, methods of evaluating teaching and learning. By its heuristic nature, it is essential in higher education and scientific research because its object deals with the selection, analysis and organization of scholarly knowledge from the reference disciplines. It therefore focuses on the selection of this knowledge with a view to their appropriation by such and such a public according to the disciplines and specialties that cover the initial doctoral training. To appropriate knowledge, the doctoral student, called researcher-apprentice, goes through stages of analysis, selection, construction and dissemination of knowledge in the form of thesis, scientific articles, communication at conferences. Being an interventionist discipline, didactics will guide the doctoral student to dig the furrow of research to produce solidly supported arguments. It is the cornerstone of all research aimed at building, developing and disseminating scientific knowledge. The additional training in didactics is intended for doctoral students engaged in all the fields and sectors selected by the MESRS. It is organized around two parts:

- Didactics of research in the form of conferences and seminars;
- Didactics of disciplines in the form of workshops.

It will be spread over an academic year divided into two sessions for an overall hourly volume of 49 hours. The first session will run from March to June, while the second will take place from September to December.

1. The objectives of training in didactics they aim to develop in the doctoral student the ability to:

- Integrate didactics as a research discipline in the path of the doctoral student as a beginner researcher
- Understand the need to include all doctoral (and post-doctoral) research in a didactic framework
- Strengthen one's own doctoral research through the use of university literacies and specialized speeches (scientific writings, thesis, journal articles, book chapters, communication, conference, symposium, congress, etc.)
- Carry out a didactic reflection in the disciplinary field(s) in which the doctoral research takes place
- Include your own research in disciplinary didactics and in professional didactics

- Appropriate the fundamental concepts of didactics to operationalize them and implement them in the specialty sector
- Appropriate scholarly knowledge and transpose it into the specialty
- Position yourself in your research on the epistemological level
- Measure the importance of mobilizing knowledge in situation and conceptualization in action
- Distinguish knowledge resulting from action from knowledge resulting from scholarly knowledge
- Identify the predicative form of knowledge and its operational form (acting in situation)
- Lead a theoretical and epistemological reflection on the foundations of research
- Measure the socio-economic impact of its research and include it in the paradigm of the scientific community
- Know how to mobilize knowledge and skills in situation (Task intelligence)

In this training, it is the doctoral students.

2. Methods of organizing training in didactics:

Overall objective:

Prepare the doctoral student for the development, writing and dissemination of the thesis, scientific articles and communications

SEMESTER 1	Conferences, seminars	Hourly	Workshops	Hourly	Session1 March-June
	Conference 1 What is didactics?	3h	Workshop 1 The contribution of didactics to the doctoral thesis	3h	
	Conference 2 Types of searches	4h			
	Seminar1 Epistemological position	4h	Workshop 2 Didactic obstacles in research	3h	
SEMESTER 2	Conference 3 Scientific writings	4h	Workshop 3 scientific writing	8h	Session 2 September- December
	Conference 4 University pedagogy and professional didactics	3h	Workshop 4 - Verbal protocols: presentation of work scientist in front of an audience	8h	
	<u>Séminaire 2</u> Intégrité scientifique et Evaluation	3h			

Table of conferences

SKILLS aimed	Conferences	Conference objectives	Content of the conference
C6, C7	Conference 1 What is didactics?	Appropriate the fundamental concepts of didactics - Include these concepts in the field and specialty of his research - Understand the role of didactics in scientific research	Definitions - Didactic/Pedagogical Distinction - Fundamental concepts (Didactic transposition, didactic triangle and didactic contract) - Didactic programming: content development
C7,C8	Conference 2 Types of searches	- Distinguish between the different types of research - Register your research in these types of research - Differentiate methodologies, approaches in exact sciences, experimental sciences and human sciences	- Action research - Quantitative research - Qualitative research - Experimental research - Feasibility research - Applied research - Quantitative approach – - Qualitative approach

SKILLS aimed	Conferences	Conference objectives	Content of the conference
C2, C8, C12, C14, C15	Conference 3 Scientific writings	- know the characteristics of scientific writings - appropriate university literacies - Acquire the scientific approach (positioning, reasoning, argumentation, support)	- Definitions: what is a scientific writing? - Formal, enunciative, linguistic, discursive characteristics of scientific writings - Discursive mechanisms underlying these characteristics - Distinction scientific writing of specialty / scientific writing of popularization - Analysis of scientific writings - Didactization of professional genres
C6, C7, C8, C12	Conference 4 University pedagogy and professional didactics	- Understand the foundations of university pedagogy and professional didactics - Know the university pedagogical practices - Develop and present a course - Transpose knowledge into knowledge actually taught - Develop “conceptualization in action”, the skills of the researcher-apprentice	The profession of university teacher, the profession of teacher-researcher - University pedagogy: characteristics and methodological approaches - Cognitive ergonomics and developmental psychology - Pragmatic skills: Disseminate and transmit knowledge. Developing student skills - Cognitive image and operative image of the teaching task

Table of Seminars

SKILLS aimed	Seminars	Objectives	Content
C6, C7, C8, C12, C14, C15	<u>Seminar 1</u> Epistemological posture	- Position yourself in your search - Appropriate scholarly knowledge and teach it - Choose an appropriate research methodology - Transpose the conceptual fields in one's own research	What is the Epistemological posture? - Epistemology and research methodology - Context/situation/environment - Concepts, conceptual fields - Predicative form of knowledge and operative form of knowledge
C1, C5, C16	<u>Seminar 2</u> Scientific integrity and assessment	- Comply with scientific integrity in scientific writings (thesis, articles, communications) and in oral presentations - Learn to quote, rephrase, summon authors, theories, ... - Mastering evaluative discourse, scientific evaluation criteria	- Distinction between morality, ethics, deontology, integrity (Cf. Charter of ethics and deontology, MESRS, 2020) - Plagiarism, self-plagiarism, copyright infringement - Falsified, biased, “fabricated” results - Distinguish between criterion and indicator

3. The didactics of disciplines (Workshops)

In order to better support the doctoral student in his research, the workshops target the specialties and are organized around the research subjects selected in the doctoral training offers. They group doctoral students by field and take place face-to-face. They are dedicated to practice. The objective is to put into practice fundamental concepts directly related to the specialty courses. Consequently, the contents of the workshops are selected according to the conferences and seminars and according to the specialties retained in the doctoral training. The workshops are led by a didactics teacher together with a specialist teacher. The two teachers work in tandem. The didactics of disciplines refers to research work that questions the researcher about the epistemological obstacles of his discipline/specialty related to the task or related to the mastery of concepts. Indeed, gaps in the mastery of the basic concepts of such and such a discipline make it difficult to overcome new obstacles. It is in terms of obstacles that the problem of scientific knowledge must be posed. Scientific progress presents itself as a permanent struggle against epistemological obstacles.

3.1. Objectives of the workshops

- Appropriate the fundamental concepts of didactics to operationalize them and implement them in the field of specialty.
- Transpose the concepts and the conceptual fields in its own research (by domains and by sectors) - Knowing how to mobilize knowledge and skills in a situation (Task Intelligence).
- Strengthen one's own doctoral research through the use of university literacies and specialized speeches (scientific writings, thesis, journal articles, book chapters, communication, conference, symposium, congress, etc.).
- Building, developing and disseminating scientific knowledge.
- Develop language skills related to specialty speech - Measure the socio-economic impact of its research and include it in the paradigm of the scientific community.

Table of Workshops

SKILLS aimed	Workshops	Objective	Content
C6, C8, C12, C16	Workshop 1 The contribution of didactics to the doctoral thesis	- Make profitable the contributions of didactics in the realization of the thesis.	- Application of the fundamental concepts of didactics to one's own research, - Transposition and explanation of scholarly knowledge, - Identification of key concepts, reuse of concepts according to research objectives, - Distinction between acquisition and appropriation, - Definition of research objectives, identification and selection of appropriate research methods, - Elaboration of research questions, thesis plan, problematic.
C6, C7, C8, C9	Workshop 2 Didactic obstacles in research	- Define the didactic obstacle, - identify research difficulties, - Overcome these difficulties	- The notion of obstacle: a didactic obstacle is a negative representation of the task: how to deal with the subject? What reading to do? How to organize the thesis work? How to advance in research? - The different types of obstacles: epistemological, cognitive, methodological, didactic,...

SKILLS aimed	Workshops	Objective	Content
C1, C2, C12, C14,	Workshop 3 Scientific writing	- Benefit from didactics in writing the thesis, scientific articles and communications at conferences (oral presentation). - Appropriate editorial techniques in scientific writing: Citing, reformulating (how to avoid plagiarism), comparing theories, synthesizing them, - Building, developing and disseminating knowledge.	- Reading and analysis of scientific texts (journal articles, book chapters) - Writing of the problem, the methodological approach, the presentation of the investigation tools, the analysis tools, the presentation of the results, - Writing of the reading report of journal articles and books.
C11, C12, C13, C15	Workshop 4 Verbal protocols: Presentation of scientific work in front of an audience	- Take a step back, distance oneself as a researcher via verbalization processes, - Socialize their research work.	- Speak in front of an assembly of specialists, - Exhibit their research and productions - Convince of the scientific interest of its work, - Discuss, put into words the actions and the approach undertaken.

4. Training of trainers

Orientation methods	Referrers	Trainer teachers
- interact, dialogue, exchange with the members of the CPNM of Didactics and members of the coordination unit within universities	- Order n°1419 of December 24, 2022 - Training program developed by the CPNM of didactics	- Permanent university teachers in university establishments specializing in didactics - for the workshops: permanent university teachers of didactics, assisted by specialist teachers

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