DEMOCRATIC AND POPULAR REPUBLIC OF ALGERIA MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH ET DE LA RECHERCHE SCIENTIFIQUE

THIRD-CYCLE TRAINING OFFER FOR THE DOCTORAL DEGREE FOR THE 2024/2025 ACADEMIC YEAR

Doctoral Training Project by Field

Institution	Domain	Field (s)
University of Médéa	Science and Technology	Renewable Energies

Supporting Structures for the Doctoral Training Project

Laboratory Code : C0561900

X

Other (Research Center or Unit):

Type of Doctoral School

Туре		
	National Doctoral School	
x	International Doctoral School	

Head of the Doctoral Training Committee (CFD)

Dr. Abdelkader MORSLI

1- Location of the Doctoral Training:

Institution	Faculty / Institut	Department
University of Médéa	Technology	Electrical and Mecanical Engineering

Head of the Doctoral Training Committee (CFD): (Professor, Associate Professor) 2-

Name & Surname : MORSLI Abdelkader

Rank : MCA

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Objectives of the Doctoral Project

✓ Objectives of this doctoral training:

The goal is to make candidates effective in research. The training focuses on industrially oriented research aimed at developing new knowledge, processes, and techniques.

The connection of the research topic with industrial concerns is essential. The institution, through its doctoral school, organizes meetings and training sessions to facilitate the future industrial integration of doctoral candidates.

The doctoral training also includes collective training and professional activities designed to:

- Strengthen the scientific culture of doctoral candidates,
- Prepare them for professional careers in both public and private sectors,
- Promote their international exposure.

In the context of renewable energies, the objectives are as follows:

- Train doctoral candidates in all aspects related to renewable energies, electrical energy, and thermal energy,
- Train them to optimize energy technically and economically,
- Improve energy and environmental management,
- Acquire theoretical knowledge and experimental skills to develop autonomy and critical thinking for all stages of research. These skills are essential for successfully completing a doctoral thesis.

✓ Connection with strategic and priority axes:

For the three-year period 2025–2028, the following strategic axes have been defined for the field of Renewable Energies:

- Bibliographic research and state of the art,
- Modeling and simulation of dedicated systems,
- Experimental validation or practical implementation in collaboration with partner companies.

Available Resources

✓ Human Resources Mobilized:

The human resources mobilized for the doctoral projects will primarily include:

- Permanent teachers participating in the third-cycle doctoral program in Renewable Energies and successful doctoral candidates from the University of Médéa,
- Teachers from other partner higher education institutions and their doctoral candidates, under agreement with our institution,
- Researchers from affiliated research centers,
- Individuals or entities (project-bearing companies).

✓ Material Resources Deployed:

Material resources are selected based on detailed specifications, ensuring impartiality and prioritizing performance to guarantee project quality. Our Renewable Energies and Materials laboratory includes research equipment such as:

- **Photovoltaic solar energy:** PV panels, MPPT controllers, DC-DC and DC-AC converters, DC and AC loads, storage batteries, etc.
- Thermal solar energy: Thermal sensors, thermocouples,
- Wind energy: Wind emulator, wind turbines, DC and AC machines (DFIG, PMSG, etc.).