

MASTER OF SCIENCE : ELECTRICAL ENERGY SYSTEMS (EES)

TYPE DE DIPLÔME

Master (LMD)

NIVEAU D'ÉTUDE VISÉ : BAC +5

ACCESSIBLE EN :

Formation initiale

Formation continue

VAE

DOMAINE D'ÉTUDE : Génie électrique

Domaine :

Objectifs

The « EES » MOST "Electrical Energy Systems" aims to provide professional training (type of activity: design offices, R & D, production, operations). It naturally offers the opportunity of a studies continuation at PHD level, in the field of Electrical Engineering and its applications related to energy processes.

ÉTABLISSEMENT

LIEU D'ENSEIGNEMENT

Toulouse

CONTACT

Savoir-faire et compétences

- Proficiency of modeling tools for the analysis of multi-physics problems
- Ability to manage and monitor energy systems, modeling techniques, optimization, acquisition and processing of data
- Ability to model static or electromechanical converters using analytical models or computer simulation codes
- Expertise in the fields of power electronics, power semiconductors and power grids, with the ability to design and implement static conversion systems,
- Expertise in the field of electricity and electrical engineering specifically oriented towards production, conversion, distribution and storage of energy.
- Ability to address the issue of renewable energy in their principles but also of their organizations, their management and their integration into the distribution networks
- Skills for control, observation and diagnosis of dynamic multi-technology systems
- Ability to design a system taking into account the environmental and social requirements (eco-design and sustainable development)

Condition d'accès

The EES MOST welcomes:

- Foreign students
- Continuing education students

Requested levels:

- For M1 level: bachelor (bac+3)
- For M2 level : M1 (bac+4)

An admission jury examines the educational and/or professional career and decides about the enrollment.

Strong partnerships in research and historic collaborations exist with foreign universities; the EES MOST (and its former versions) have received students coming from (but not exclusively):

- Spain: Pamplona, Mondragon, Bilbao, Barcelona
- Poland: Gdansk, Warsaw, Krakow
- Algeria: Polytechnic Algiers, Constantine, Oran
- Tunisia: Tunis (ENIT), Monastir (ENIM)
- Morocco: Hassania School
- Lebanon: Beirut, Roumieh
- Italy: Turin, Naples
- Romania: Bucharest

Pré-requis nécessaires

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Stages

Internship project (6 months) in industry (production, offices, R & D) or academic research laboratories.

Poursuite d'études

Perspectives professionnelles

The following fields of professional activities are concerned:

- The production of energy in its various forms;
- The conversion of energy in electrical form, control of its collection from the sources (hydro, wind, photovoltaic) and storage;
- Power systems and their management; Applications: Embedded networks (transport: air, rail and car) and autonomous;
- The processes implementing a variety of forms of energy, focusing on electricity (eg in housing, electricity, gas, heat ...)
- Electrical energy conversion processes: static conversion, electromechanical conversion, mechatronic and their applications in all industry branches related to Electrical Engineering.
- Ability to manage and monitor energy systems, modeling techniques, optimization, acquisition and processing of data

Professional profiles: engineer, researcher, teacher