Sciences Appliquées

MASTER

Electronic, Electrical Energy and Automatic regulation

Speciality **Electrical Machine Metrology and Electromagnetic Phenomena (MeMaPE)**

JOB OPPORTUNITIES

- Doctoral thesis (PhD)
- Electrical Engineer
- Research and Development Engineer

TRAINING OBJECTIVES

The aim is to train electrical engineers to understand electromagnetic phenomena tied to electrical machines (transformers and rotating machines) and to design, optimize, supervise, and measure a wide variety of electrical systems. The courses are focused on hands-on experiences and provide scientific and technical know-how to work on electrical engineering field. The students benefit of a close cooperation with researchers of the LSEE laboratory.
The master will offer many opportunities : students have the possibility to carry on a PhD thesis or to work in an industrial environment related to electrotechnical and energy fields.

AQUIRED ABILITIES

- Monitor energy consumption balance
- Set up energy metering systems
- Perceive the environmental impacts of industrial systems
- Design electrical machines such as transformers or rotating machines
- Choose suitable electric and magnetic materials to design electrical machines
- Manage energy production machines
- Manage electrical energy consumption
- Use numerical measurement systems
- Use predictive maintenance and diagnosis tools
- Measure complex phenomena on electrical machines in a wide range of power

ADVANTAGES

- The courses of the second year are given in french and english, allowing international students to easily be integrated.
- Opportunities to do a training period in « Electrotechnical Systems and Environement Research Lab », this research lab is internationally recognized (*www.lsee.fr*).
- Opportunities to do a training period in a french company dedicated to electrical engineering.
- High employment rates in a wide range of French or European companies.

UNIVERSITÉ D'ARTOIS

FACULTÉ DES SCIENCES APPLIQUÉES
Rue Gérard Philipe, Technoparc Futura
62400 BÉTHUNE
Tél. 03 21 63 71 09

www.univ-artois.fr

PACE OF WORK

- **FIRST SEMESTER**
from september to december

- **SECOND SEMESTER**
training period in january and february, courses from march to june

- **THIRD SEMESTER**
from september to january

- **FOURTH SEMESTER**
from february to july

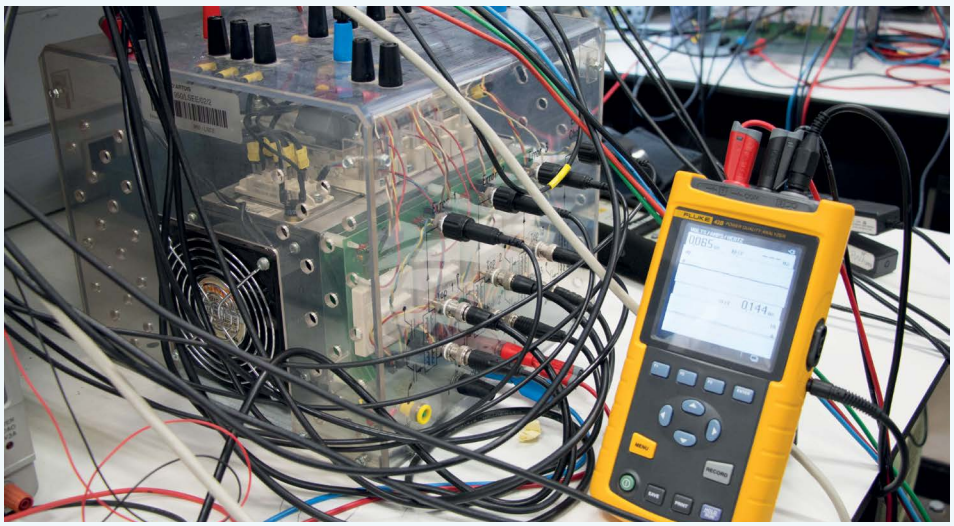
ACCESS CONDITIONS

FIRST YEAR : Electrical engineering french bachelor, or equivalent (subject to acceptance)
SECOND YEAR : First year of Electrical engineering Master, or equivalent (subject to acceptance)
B2 level in language of instruction (French or English) certified by an official test score (DELF, DALF, French Bac, TOEFL IBT 80, TOEIC 785, IELTS 6.0 or equivalent), except students from countries where the desired language of instruction is official language. French is NOT a prerequisite for English-taught programs

CONTINUING EDUCATION : Job seekers and employees can apply to the Master's degree.
Contact : 03 21 60 37 07 / fcu-fare@univ-artois.fr
They can apply to the Master's degree or graduate through the validation of professional achievement and experience (VAPP) or the validation of prior experience (VAE) or a mixed course.
Contact : 03 21 60 60 59 / fcu-pac@univ-artois.fr

PROGRAM

SEMESTER 1 (*in french*)	SEMESTER 2 (*in french*)
▪ English - Communication ▪ Mathematics - Computer science ▪ Electrical engineering ▪ Power Electronics ▪ Industrial programmable logic controller	▪ Electrical engineering of electrical machines ▪ Automatic regulation ▪ Electronics ▪ Lighting concepts ▪ Thermodynamics ▪ Electrical distribution ▪ Training period
SEMESTER 3 (*in french and english*)	**SEMESTER 4**
▪ Energy management and environmental footprint ▪ Materials for Electrical Engineering ▪ Electrical machinery ▪ Control of electrical drives ▪ Machine metrology ▪ Diagnosis and predictive maintenance ▪ Acquisition and measurement systems	▪ Academic training period ▪ Training period in the industry or a research lab



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www.facebook.com/fsage.fr