MASTER ENERGY

IN BRIEF

Type of diploma : Master degree
Ministry field(s) : Science and Technology

PRESENTATION

MORE INFO

Why SIMOS?

Due to the complexity of current industrial processes, the development and improvement of the operations of these facilities is possible only with rigorous optimization methods.

The International Master's SIMOS (SIMulation and Optimization of energy Systems) offers specialized training in the field of Energy and more specifically, the optimization of energy systems.

This training is of high interest for students from around the world.

OBJECTIVES

The International Master's SIMOS (SIMulation and Optimization of energy Systems) offers specialized training in the field of Energy and more specifically, the optimization of energy systems.

SKILLS

The graduates of the Master's degree will be able to analyze and estimate a complex installation of production, conversion, transport, storage and energy consumption to insure the management. They will also may design new units.

TRAINING CONTENT

Semester 1

* **Linguistic preparation - Level I**

100h

8 ECTS Credits

* **Computer tools**

100h

8 ECTS Credits

* **Mathematics**

50h

4 ECTS Credits

* **Process Engineering and Energy**

150h

10 ECTS Credits

Semester 2

Mid-September – mid-January

* **Linguistic preparation - Level II**

100h

8 ECTS Credits

* **Programming and numerical methods**

100h

7 ECTS Credits

Read more...

* **Fundamentals of Engineering Thermodynamics**

50h

4 ECTS Credits

Read more...

* **Worldwide energy supply issues**

  60h

  4 ECTS Credits

  Read more...
* **Energy conversion**

  90h

  7 ECTS Credits

  Read more...

Semester 3

mid-January – June

* **Energy efficiency and reuse**

  100h

  7 ECTS Credits

  Read more...
* **Modelling of energy systems**

  100h

  7ECTS Credits

  Read more...
* **Numerical tools for optimization**

  100h

  7 ECTS Credits

  Read more...
* **Projects**

  100h

9 ECTS Credits

Read more...

Semester 4

July – December

Project or internship conducted in a company or research laboratory in France or abroad, the main objective being related to the professional project of the student. *30 additional ECTS credits*

Read more...

ORGANIZATION

- Master SIMulation and Optimization of energy Systems

ACCESS CONDITIONS

Scientific Bachelor’s degree

Applications are opened from January to May each year.

Apply at: ensgti.univ-pau.fr/master-simos

Tuition fees

6000€ / year

TARGET

Foreign students

NEEDED PREREQUISITE

* Prerequisites include strong basic knowledge in mathematics, physics, heat transfers, thermodynamics and IT.

* Possibility to follow these courses in the framework of ERASMUS Exchanges.

PROFESSIONAL INSERTION

Research and Development or Production, Expertise in optimization of energy systems.

ORGANIZATIONAL UNIT

ENS en Génie des Technologies Industrielles

PLACES

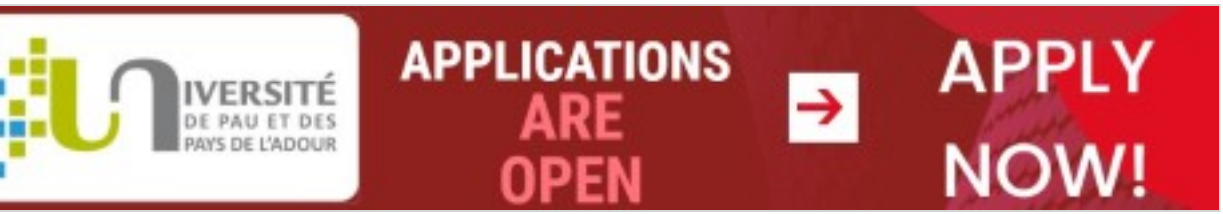
Pau

PERSON IN CHARGE

Master SIMulation and Optimization of energy Systems

PRESENTATION

MORE INFO



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ADDITIONAL INFORMATION

Language of teaching : English

Introduction to the French language and culture.

International Welcome Desk

TRAINING CONTENT

* The program is organized in four semesters (120 ECTS)
* The student will spend 3 semesters in France, the first semester S1 (30 ECTS credits) must be obtained through validation of a prior learning.

S1 : Linguistic and technical basics

S2 : Specialization in energy

S3 : Optimization of energy systems

S4 : Final study project

Program : read more

CONTROL KNOWLEDGE

http://ensgti.univ-pau.fr/master-simos/

ACCESS CONDITIONS

The Master's degree begins in January. The first semester of the first year will be validated based on the hereafter criteria.

You must hold the following degree:

* A bachelor with a major in Science with prerequisites, including strong basic knowledge in mathematics, physics, heat transfers, thermodynamics and IT.

The program can also be accessed via an Erasmus exchange.

See SIMOS Website for additionnal information

INSCRIPTION MODALITIES

TARGET

Foreign students

EXPENSES

* 6000 € for the Master's programme (Semester 8 +Semester 9) + National tuition fees for the last semester (Semester 10) which consists of an internship.

NB: *Admitted candidates in any course of study who have taken a break of more than two years from their studies will enroll via the UPPA's* **Continuing Education service** *(Formation Continue / FORCO). They are exempt from the CVEC, however they may be subject to a different tuition scale.*

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ORGANIZATIONAL UNIT

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PERSON IN CHARGE