



INTERNATIONAL MASTER'S SIMOS

SIMulation and Optimization
of energy Systems

Accreditation

This Master is accredited by the French Ministry of Education.

School proposing the master

ENSGTI is an engineering school "Grande Ecole", specialized in Chemical/Process Engineering and Energetic systems.

Language of teaching

English

Introduction to the French language and culture.

Location

ENSGTI is located in Pau, in the south-west of France, at the foot of the Pyrenees, near the Atlantic Ocean and the Spanish border. The «Université de Pau et des Pays de l'Adour» campus provides all the student's facilities: student's residence, sports facilities, associations, student unions, etc...



Objectives

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.

Admission requirements

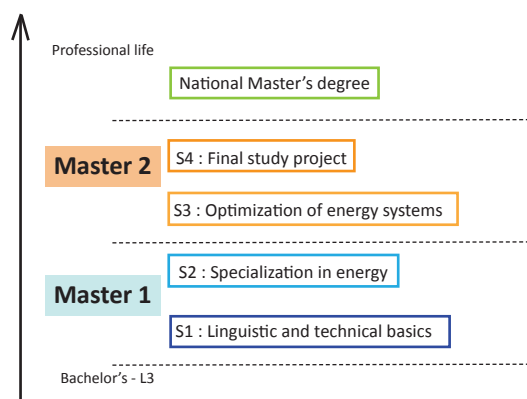
- Scientific Bachelor's degree with prerequisites, including strong basic knowledge in mathematics, physics, heat transfers, thermodynamics and IT.
- Possibility to follow these courses in the framework of ERASMUS Exchanges.

Career opportunities

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

Courses

The program is organized in four semesters (120 ECTS credits) :



The student will spend at least 3 semesters in France, the first semester S1 (30 ECTS credits) can be obtained by acquired knowledge accreditation.



Courses

Semester 1 (Master 1)

Courses	Hours	ECTS Credits
Linguistic preparation - Level I	100h	8
Computer tools	100h	8
Mathematics	50h	4
Process Engineering and Energy	150h	10

Semester 2 (Master 1; mid-September – mid-January)

Courses	Hours	ECTS Credits
Linguistic preparation - Level II	100h	8
Programming and numerical methods	100h	7
Fundamentals of Engineering Thermodynamics	50h	4
Worldwide energy supply issues	60h	4
Energy conversion	90h	7

Semester 3 (Master 2; mid-January – June)

Courses	Hours	ECTS Credits
Energy efficiency and reuse	100h	7
Modelling of energy systems	100h	7
Numerical tools for optimization	100h	7
Projects	100h	9

Semester 4 (Master 2; 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).

Cost

6000€ / year

Applying

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

Applications are opened from January to May each year.

Contacts

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ENSGTI

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