



SIMOS : SIMulation and Optimization of energy Systems

Objectives

Due to the complexity of current industrial processes, the development and improvement of operations 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. Career opportunities : Research and Development, Production, Expertise in optimization of energy systems.

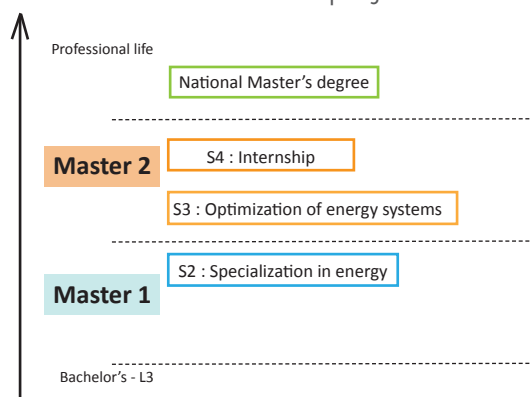
Admission requirements

Scientific Bachelor's degree with prerequisites, including strong basic knowledge in mathematics, physics, thermodynamics and heat transfers.

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

A four-semester Master Diploma (120 ECTS)

The first semester credits (30 ECTS) are attributed at the admission in the Master program by validation of prior learning experience. The program is then organized in three semesters (30 ECTS each). Semester 2 and 3 are devoted to courses and projects. Semester 4 is a 6 months internship.



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 Energetics systems

Courses

Semester 1 (Master 1)

Credits (30 ECTS) of semester 1 are attributed at the admission in the program by validation of prior learning experience in Mathematics, Computer tools, Process engineering and Energy.

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

Language of teaching :

English

Introduction to the French language and culture

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

3 000€ / semester - 9 000€ for the master program

Applying

Apply at: ensgti.univ-pau.fr/master-simos
Application for the next year program are opened from November 1 to May 31.

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...

CONTACT :

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ENSGTI

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