Université Paris-Saclay

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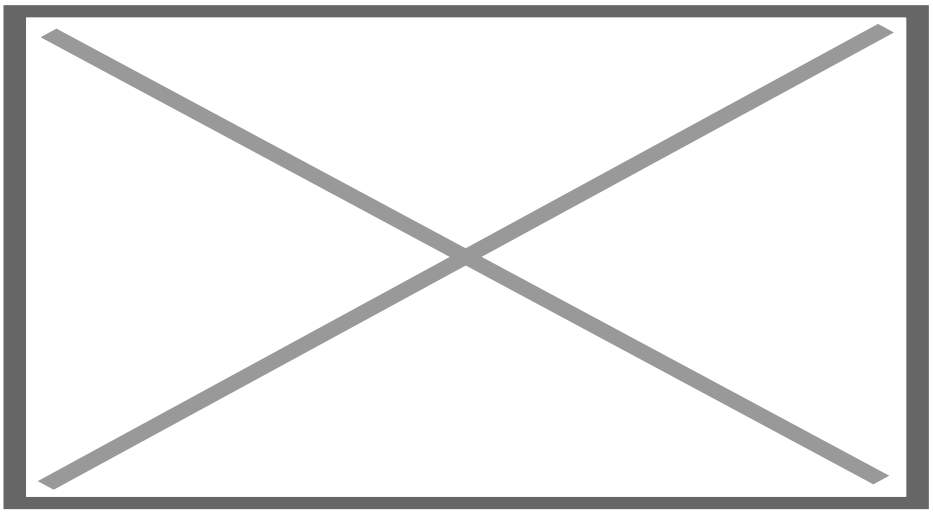
M1 Energy - International track

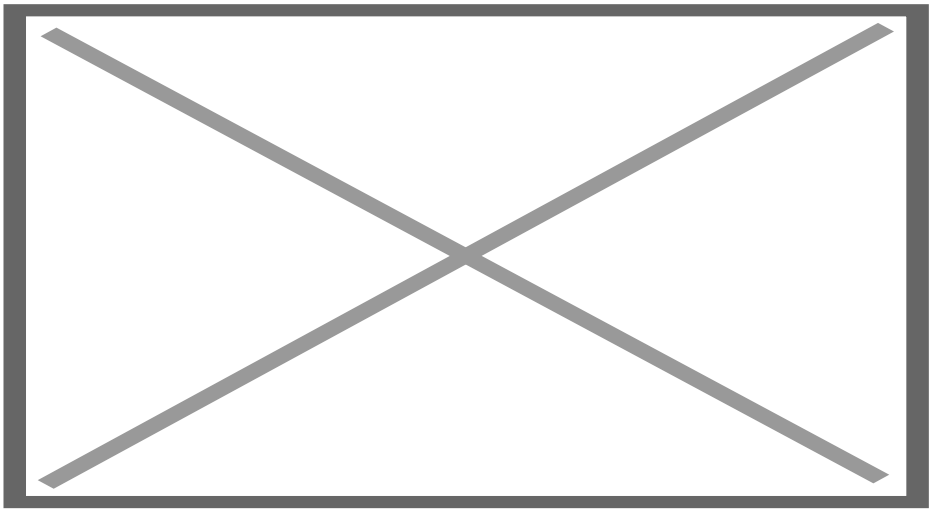
Master's degree
Specialisation Energy
Enrolment type
Formation initiale
Language(s) of instruction
English

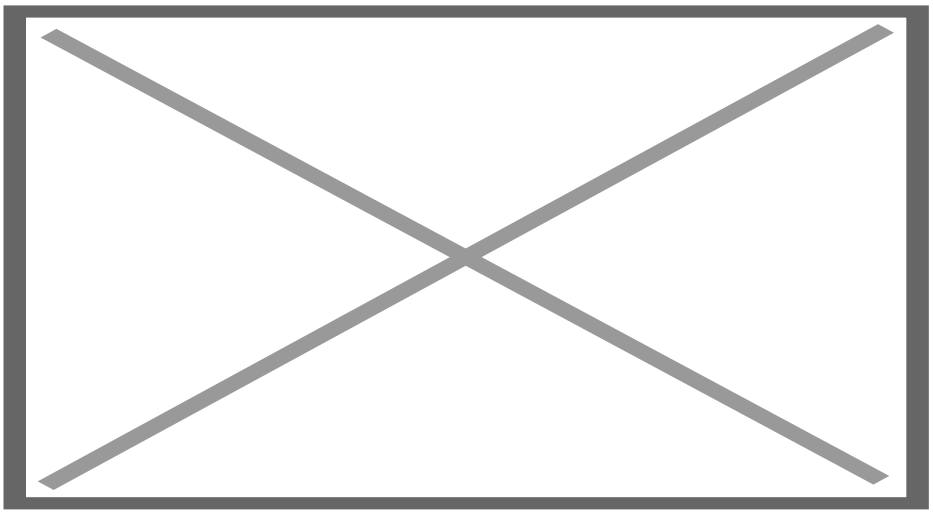
The Energy Master’s program is supported by an exceptional research ecosystem on the Plateau de Saclay, where its key themes — innovative materials, new energy technologies, networks, and sustainable mobility — are central to the work of the IPVF and VEDECOM institutes, as well as numerous academic (CNRS, CEA) and industrial (Renault, PSA, Thales, Safran, EDF) laboratories.

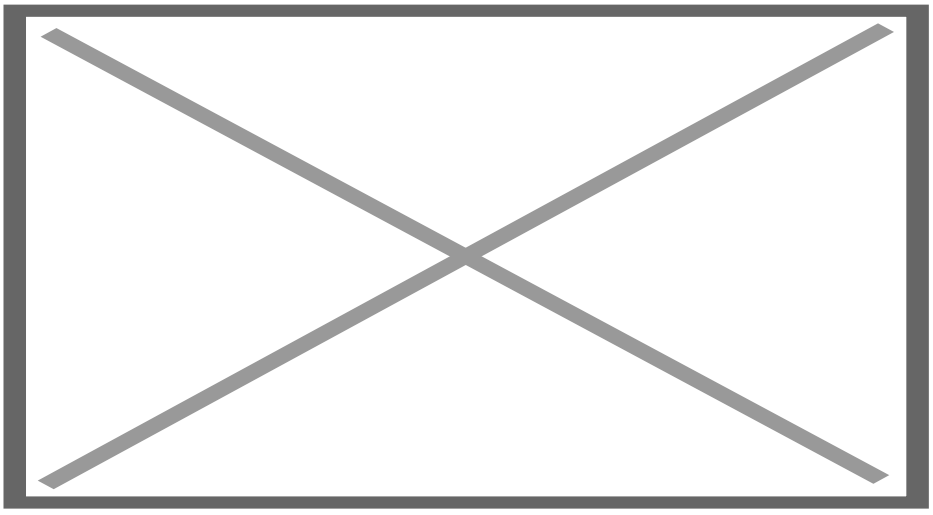
One of the major contemporary challenges is meeting the growing global energy demand while reducing greenhouse gas and pollutant emissions. Today, nearly 80% of the energy consumed in France (and more than 85% in developed countries) still comes from fossil fuels, but the share of renewable and nuclear energy is expected to increase significantly in the coming years.
This transition paves the way for major innovation challenges in the production of cleaner and more efficient energy, as well as in the development of high-performance and sustainable distribution systems.

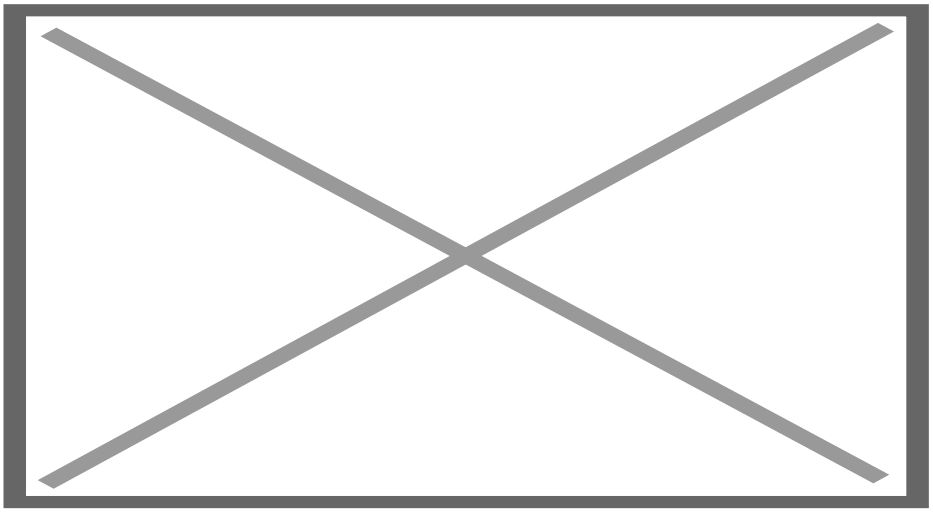
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Information

- Overview
- Application requirements
- Schedule

Présentation

Objectives

One of the world’s most pressing challenges is to meet the fast-growing energy demand while at the same time reducing greenhouse gases and pollutant emissions. Today, and for the foreseeable future, 80% of the energy consumed in France comes from fossil fuels (over 85% in developed countries, and almost 100% in developing countries), but the production of renewable and nuclear energy is bound to increase sharply. This situation opens exciting new challenges in developing cleaner and more efficient energy production methods, as well as more effective energy distribution systems.The general objectives of the M1 are to:
• provide the scientific background required in the field of energy. In particular in transport phenomena, chemical engineering, materials, reactive media, treatment and conversion of electrical energy;
• give, through the core curriculum, an introduction to great energy challenges;
• give a first experience of numerical methods required to solve complex problems.

Admission

Admission Route

Physics, Chemistry
Engineering Sciences

Capacity

Available Places

20

Target Audience and Entry Requirements

Good background in physics, mechanical engineering, chemical engineering or electrical engineering and strong skills in mathematics.Bachelor level or equivalent.

Période(s) de candidature

Inception Platform

From 15/01/2026 to 15/06/2026

Supporting documents

Compulsory supporting documents

Motivation letter.

All transcripts of the years / semesters validated since the high school diploma at the date of application.

Certificate of English level (compulsory for non-English speakers).

Curriculum Vitae.

Additional supporting documents

VAP file (obligatory for all persons requesting a valuation of the assets to enter the diploma).

Programme

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	distanc learni cours
French language 2	2	Semestre 2	10	10					
Charger le détail									
English language 2	2	Semestre 2	10	10					
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	distanc learni cours
French language 1	2	Semestre 1	10	10					
Charger le détail									
English language 1	2	Semestre 1	10	10					
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practica class
Economics	4	Semestre 2	16.5	16.5				
Charger le détail								
Chemical Engineering	4	Semestre 2	16.5	16.5				
Charger le détail								
Thermodynamics	4	Semestre 2	12	12				
Charger le détail								
Research project	6	Semestre 2						
Charger le détail								
Materials	4	Semestre 2	16.5	16.5				
Charger le détail								
Renewable Energy	4	Semestre 2	15		18			
Charger le détail								
Energy Conversion	4	Semestre 2	16.5	16.5				
Charger le détail								
Simulations and MultiPhysics Coupling	4	Semestre 2	13.5	13.5				
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practica class
Nuclear Engineering	4	Semestre 2	16.5	16.5				

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dista lear cou
Heat Transfer	4	Semestre 1	15	18					

Charger le détail

Transport Phenomena	4	Semestre 1	16.5	16.5					

Charger le détail

Reactive Media	4	Semestre 1	16.5	16.5					

Charger le détail

Fluid mechanics	4	Semestre 1	16.5	16.5					

Charger le détail

Electrical Energy	4	Semestre 1	15	18					

Charger le détail

Laboratory classes	6	Semestre 1			48				

Charger le détail

Teaching Location(s)

GIF SUR YVETTE

Contact

- **Gabi-Daniel STANCU**

  CentraleSupélec

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http://www.universite-paris-saclay.fr/formation/master/energie/m1-energy-international-track