Université Paris-Saclay

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M2 Transfert et conversion de l'énergie

Master's degree

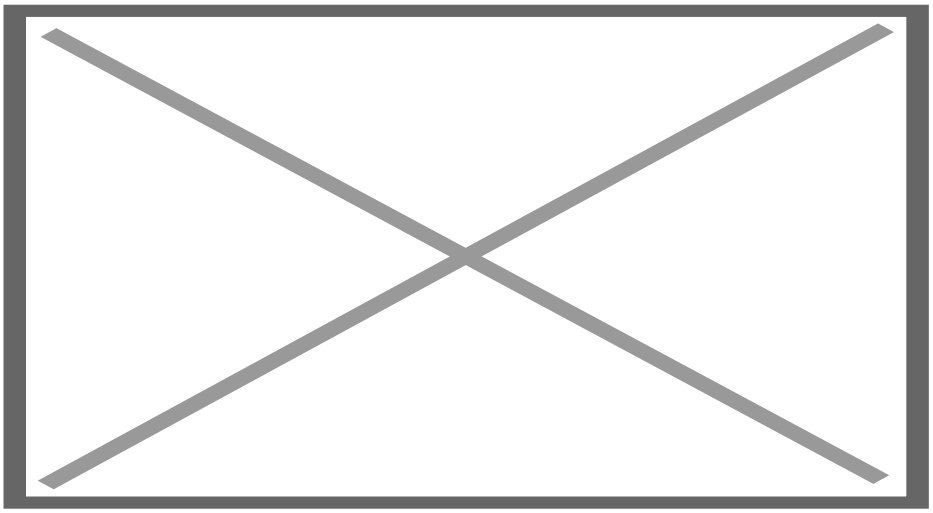
Specialisation Energy

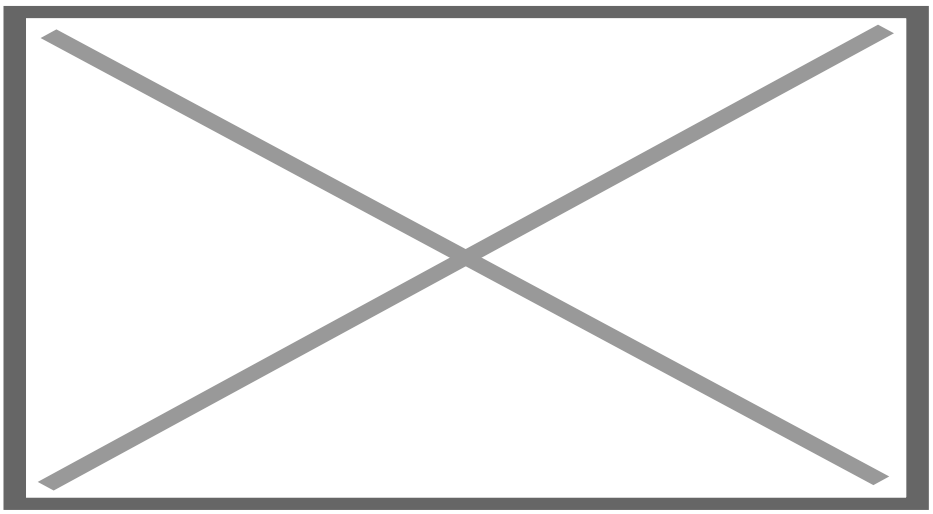
Language(s) of instruction

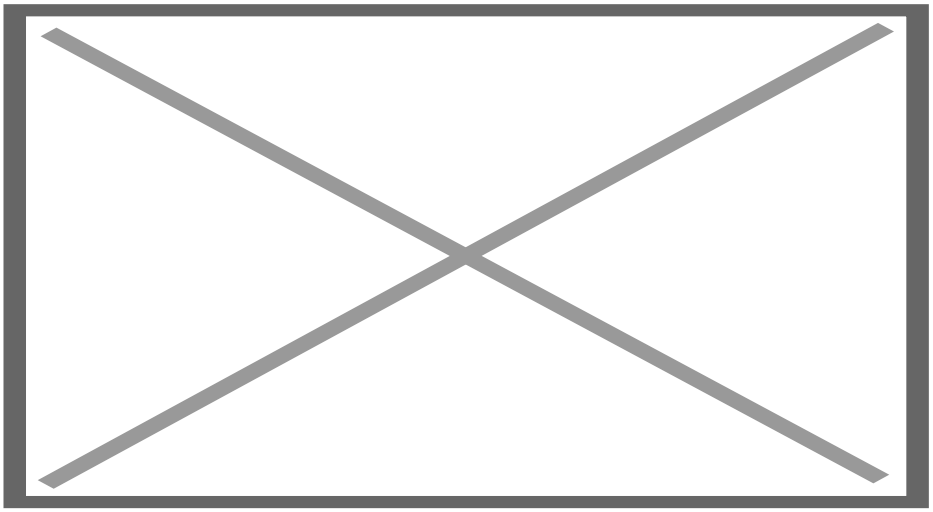
French

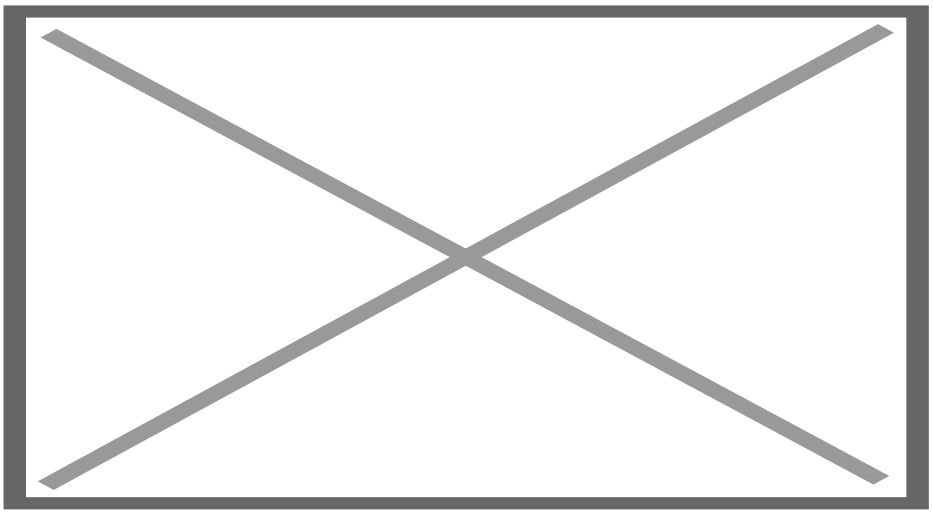
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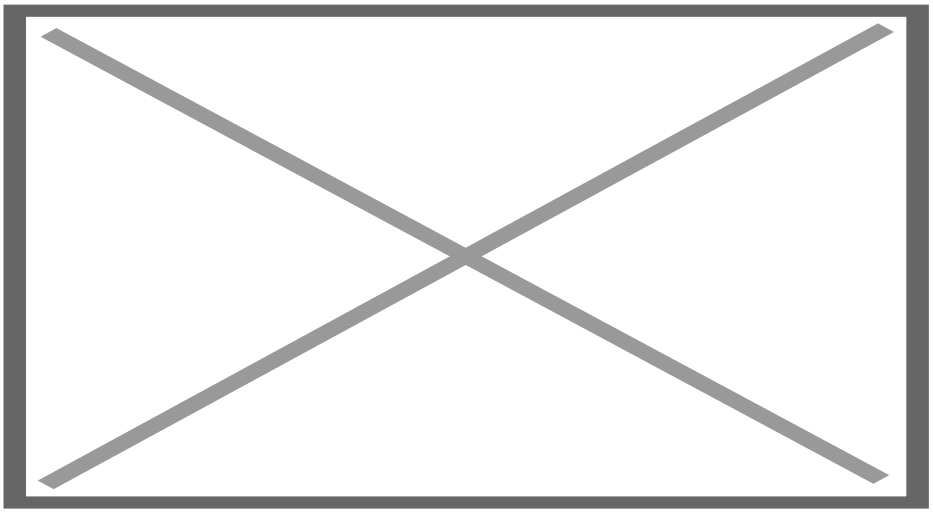
Apply Now











Information

- Overview
- Application requirements
- Schedule

Présentation

Objectives

The Master’s program in “Energy Transfer and Conversion” aims to train scientists capable of working at the highest level in the energy sector. The curriculum is designed to meet the growing and significant needs of this field by educating scientists with solid knowledge and skills in the various modes of energy transfer and conversion in its electrical and thermal forms. The program seeks to develop professionals who can meet the energy challenge by mastering complex techniques and advancing in their careers at all levels of responsibility.

The program consists of a core curriculum covering the fundamentals of mass and heat transfer, reactive media, and electrical energy conversion. Students can then choose a specialization track. The “Fluids and Heat” track offers courses on turbulent and two-phase flows, with an in-depth focus on heat transfer. The “Electrical Conversion” track offers courses on advanced electrical systems. In each specialization, students will approach scientific problems through theoretical, experimental, and numerical methods.

Admission

Capacity

Available Places

10

Target Audience and Entry Requirements

Cours fondamentaux en sciences de l'ingénieur dans les domaines mécanique et/ou électrique

Période(s) de candidature

Inception Platform

From 30/01/2026 to 15/06/2026

Supporting documents

Compulsory supporting documents

Motivation letter.

Letter of recommendation or internship evaluation.

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

Curriculum Vitae.

Detailed description and hourly volume of courses taken since the beginning of the university program.

Additional supporting documents

Certificate of French (compulsory for non-French speakers).

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

Document indicating the list of local M2 choices available here : https://urlz.fr/i3Lo.

Supporting documents :
- Residence permit stating the country of residence of the first country
- Or receipt of request stating the country of first asylum
- Or document from the UNHCR granting refugee status
- Or receipt of refugee status request delivered in France
- Or residence permit stating the refugee status delivered in France
- Or document stating subsidiary protection in France or abroad
- Or document stating temporary protection in France or abroad.

Programme

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	d
Transferts thermiques et mécaniques des fluides avancés	4	Annualisé	24						
Charger le détail									
Turbulence	2	Annualisé	15						
Charger le détail									
écoulement diphasique	2	Annualisé	15						
Charger le détail									
Milieux poreux	2	Annualisé	15						
Charger le détail									
Rayonnement	2	Annualisé	15						
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	d
Turbomachine	2	Annualisé	15						
Charger le détail									
Combustion décarbonée	2	Annualisé	15						
Charger le détail									
Plasma	2	Annualisé	15						
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	d
Sciences numériques	2	Semestre 1	12		12				
Charger le détail									
Production d'énergie: nucléaire, fossile, renouvelable, solaire, matériaux pour l'énergie	3	Semestre 1	48						
Charger le détail									
Langues	2	Semestre 1	20						
Charger le détail									
Gestion de Projet - Bureau d'Etude	4	Semestre 1	36						
Charger le détail									
Cycle de Conférences	1	Semestre 1	6						
Charger le détail									
Activités expérimentales	2	Semestre 1	6		18				
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	distanc learni cours
Projet de synthèse	6	Semestre 2							

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dista learn cou
Initiation à et par la Recherche	18	Semestre 2							

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di le
Energie bâtiment	2	Semestre 2	15						

Charger le détail

scénario de décarbonation	2	Semestre 2	15						

Charger le détail

UE libre Catalogue S1	2.5	Semestre 1							

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di le
Conversion électrique en régime dynamique	4	Annualisé	24						

Charger le détail

Fiabilité	2	Annualisé	15						

Charger le détail

Système et composants électroniques avancés	2	Annualisé	15						

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di le c
systèmes d'énergie embarquées	2	Annualisé	15						
Charger le détail									
stockage d'énergie	2	Annualisé	15						
Charger le détail									
smartgrid	2	Annualisé	15						
Charger le détail									
Système à vitesse variable	2	Annualisé	15						
Charger le détail									
Système de conversion électronique	2	Annualisé	15						
Charger le détail									

Teaching Location(s)

GIF SUR YVETTE

Contact

- **Fiorina BENOIT**

  CentraleSupélec
- **CentraleSupélec SUPPORT SCOLARITE**

  Support scolarité

http://www.universite-paris-saclay.fr/formation/master/energie/m2-transfert-et-conversion-de-lenergie