Université Paris-Saclay

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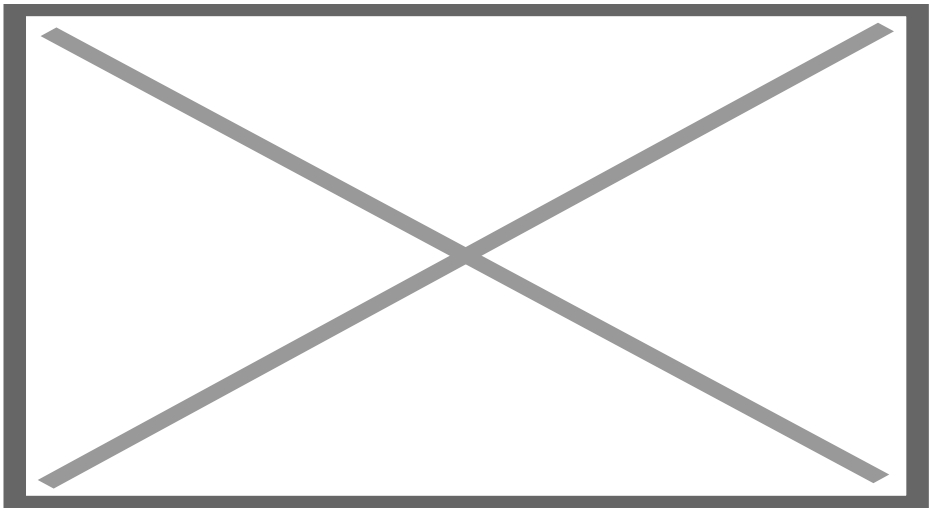
M1 Physique - Voie Irène Joliot-Curie - Magistère

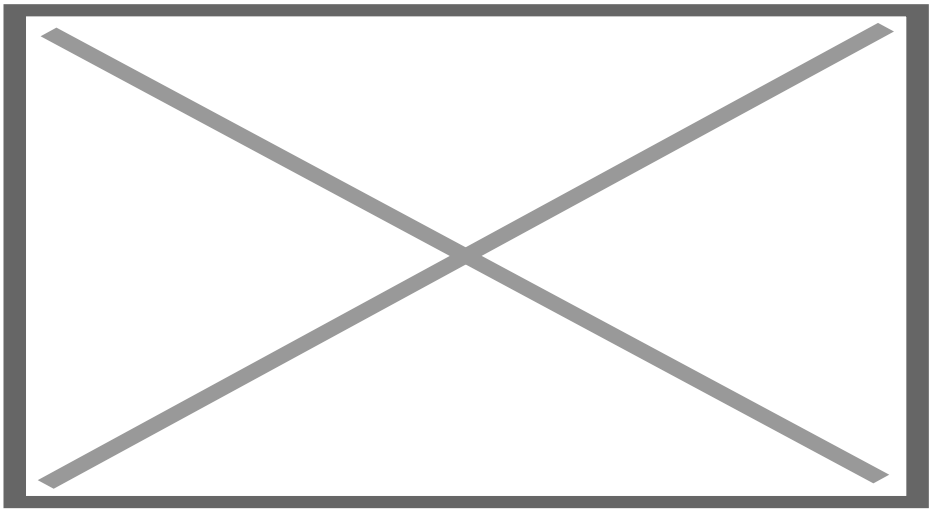
Master's degree
Specialisation Physique fondamentale et applications
Enrolment type
Formation initiale
Language(s) of instruction
French

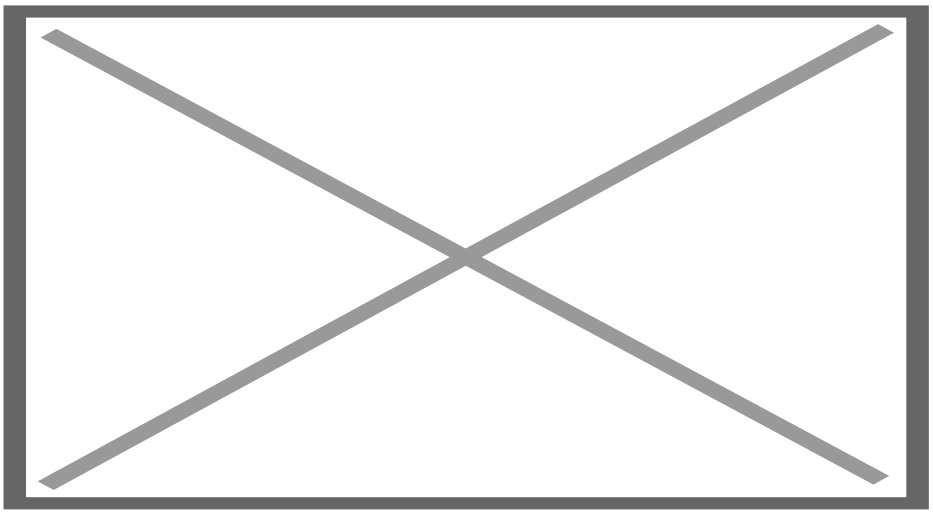
The M1 in Physics Voie Irène Joliot-Curie - Magistère aims to provide high-level general training that allows students to deepen their understanding of fundamental concepts in the major fields of physics.

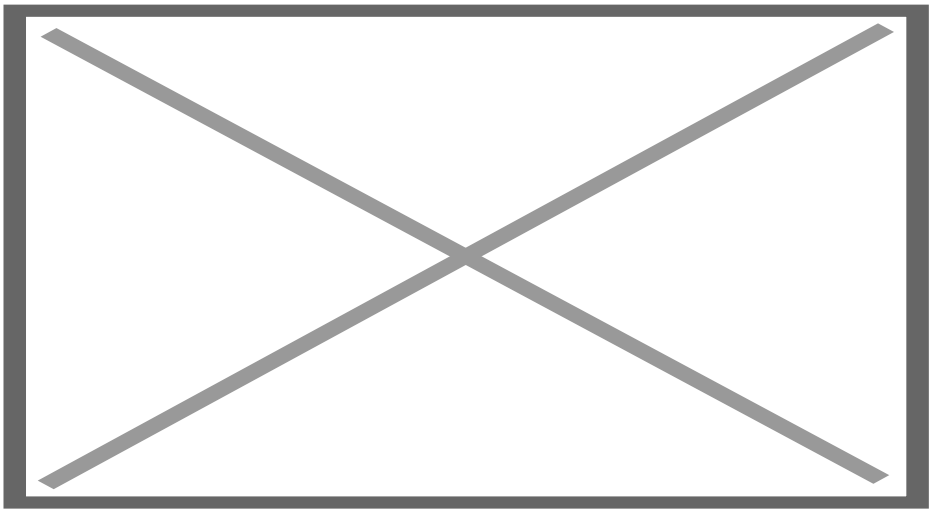
This programme offers a wide range of options that allow students to begin specialising or to explore other areas of physics. It also emphasises experimentation with numerous practical works. It opens up a wide range of Master's 2 programmes in physics.

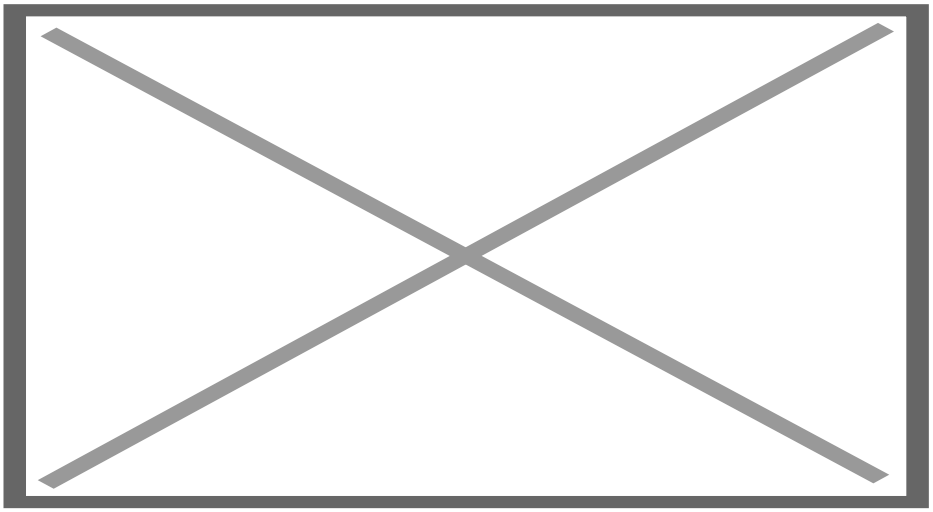
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Information

- Overview
- Application requirements
- Schedule

Présentation

Skills

Master and apply specialised knowledge of physics with the necessary scientific rigour.

Objectives

The M1 in Physics Voie Irène Joliot-Curie - Magistère is a generalist physics programme. This programme builds on the L3 in Fundamental Physics. It covers a wide range of topics, enabling students to apply fundamental concepts in many areas of physics, such as condensed matter, subatomic physics, atomic and molecular physics, laser physics, plasma physics, soft matter, and more. A wide range of options is also available to students who are required to complete a compulsory internship at the end of the M1 programme. After the M1, students can apply for any of the M2 programmes in physics.

Débouchés

Career prospects

After a Master's or Master's + PhD: engineer (R&D, control, production, etc.)
After a Master's + PhD: researcher or lecturer
Research or Design Engineer
Lecturer (after a PhD)
Teacher (after the CAPES or 'agrégation' competitive exam)

Further Study Opportunities

PhD
PhD thesis
Students in this track can turn to research at the end of the 2nd year Master's.
R&D researcher or data modelling and analysis expert in leading-edge companies or laboratories.

Admission

Admission Route

Physics

Capacity

Available Places

100

Target Audience and Entry Requirements

The M1 in Physics Voie Irène Joliot-Curie - Magistère is a demanding course aimed at students who have completed a Bachelor's degree in Physics. A good knowledge of general physics courses (analytical mechanics, quantum mechanics, electromagnetism, statistical physics, optics, etc.) is required.

Période(s) de candidature

Inception Platform

From 01/06/2026 to 13/07/2026

Supporting documents

Compulsory supporting documents

Motivation letter.

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

Curriculum Vitae.

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.

Additional supporting documents

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

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

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	dist lea co
UEs obligatoires									
Physique Atomique et Moléculaire	6	Semestre 1	25.5	24.5					
Charger le détail									
Noyaux et Particules	6	Semestre 2	25.5	24.5					
Charger le détail									
Physique des Lasers	3	Semestre 2	12.5	12.5					

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dist lea co
Charger le détail									
UEs à choix									
Rattrapage Physique Statistique Classique en M1	3	Semestre 1	13	13					
Charger le détail									
Mécanique des Fluides	3	Semestre 1	12.5	12.5					
Charger le détail									
UEs coloration									
Physique non linéaire	3	Semestre 2	12.5	12.5					
Charger le détail									
Physique des Plasmas	3	Semestre 2	12.5	12.5					
Charger le détail									
Matière molle	3	Semestre 2	14	11					
Charger le détail									
Relativité générale et cosmologie	3	Semestre 2	16.5	8.5					
Charger le détail									
UE libre S2	3	Semestre 2							
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practic class
UEs obligatoires								
Anglais	3	Semestre 1		25				
Charger le détail								
Informatique Python	4	Semestre 1	14	21				

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practic class
Charger le détail Matière condensée	6	Semestre 2	24.5	24.5				
Charger le détail Options 1								
Compléments de Physique et Chimie pour l'agrégation	6	Semestre 1	27	12	6.5			
Charger le détail Astrophysique : concepts et observations	6	Semestre 1	18	14	18			
Charger le détail Transitions de phases	6	Semestre 1	25	25				
Charger le détail Physique appliquée à la médecine : de la biologie à la thérapie	6	Semestre 1	33	6	6			
Charger le détail Nanosciences et Nanotechnologies	6	Semestre 1	28		24			
Charger le détail Génie nucléaire : Transferts thermiques	3	Semestre 1	12.5	12.5				
Charger le détail Génie nucléaire : Science des matériaux appliquée au nucléaire	3	Semestre 1	9	8.5	7			
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practic class
Electrodynamique classique et quantique	6	Semestre 1	24.5	24.5				
Charger le détail								
Développements récents en magnétisme et supraconductivité	6	Semestre 1	30	20				
Charger le détail								
Astrophysique avancée	6	Semestre 1	42		9			
Charger le détail								
UEs à choix								
Physique statistique quantique	3	Semestre 1	12.5	12.5				
Charger le détail								
Rattrapage Physique Statistique Quantique en M1	3	Semestre 1	12.5	12				
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
Travail bibliographique	2	Semestre 2						
Charger le détail								
Enseignement Expérimental	12	Semestre 2			64			
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
UE Coloration Magistère								
Physique non linéaire	3	Semestre 2	12.5	12.5				
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed	Lecture/practical class	directed study/practical class
Physique des Plasmas	3	Semestre 2	12.5	12.5				
Charger le détail								
Matière molle	3	Semestre 2	14	11				
Charger le détail								
Relativité générale et cosmologie	3	Semestre 2	16.5	8.5				
Charger le détail								
Option spécifique								
Compléments de Physique et Chimie pour l'agrégation Magistère	3	Semestre 1	27	12	6.5			
Charger le détail								
Informatique C++	3	Semestre 1	8	28				
Charger le détail								
Option 2								
Fluides complexes et interfaces	3	Semestre 2	11	11	3			
Charger le détail								
Interface biologie-physique : Fonctionnement du vivant et méthodes d'étude physiques	3	Semestre 2	21	3.5				
Charger le détail								
Optique non linéaire	3	Semestre 2	20	6				
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
Physique à l'échelle nanométrique	3	Semestre 2	7	17.5				
Charger le détail								
Physique de la conversion et du stockage de l'énergie	3	Semestre 2	12.5	12.5				
Charger le détail								
Physique du climat	3	Semestre 2	8	13				
Charger le détail								
Génie nucléaire – Processus stochastiques	3	Semestre 2	12.5	12.5				
Charger le détail								
Optique quantique	3	Semestre 2	16	9				
Charger le détail								
Quantum Matter	3	Semester 2	18	12				
Charger le détail								
Astroparticles	3	Semester 2	15	10				
Charger le détail								
Physique des semi-conducteurs	3	Semestre 2	12.5	12.5				
Charger le détail								

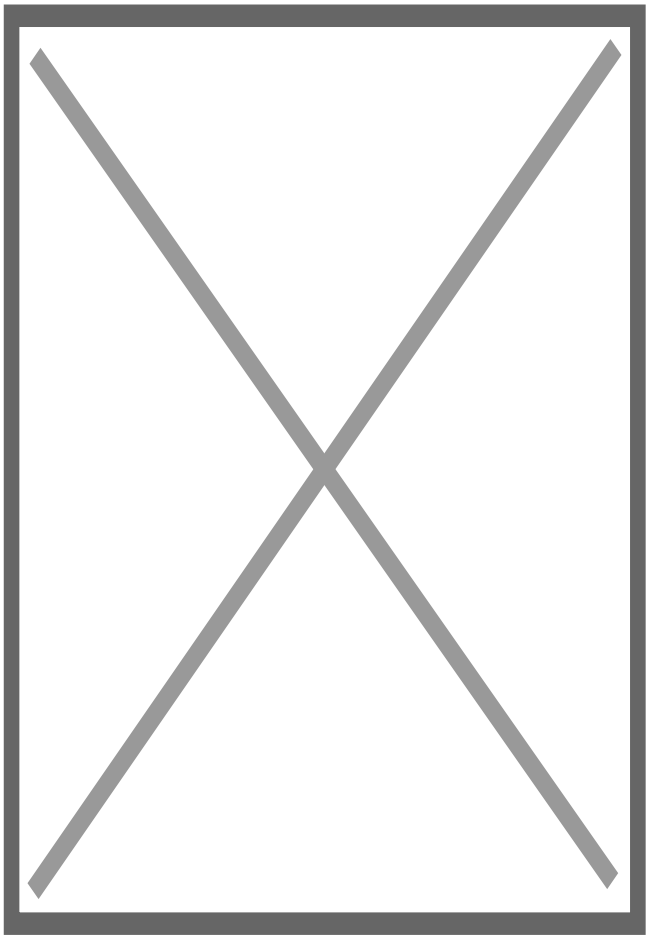
Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	distanc learni cours
Stage	11	Semestre 2							
Charger le détail									

Teaching Location(s)

ORSAY

Training campus

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Saclay Moulon

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Bus 4606 / 4609 / 4611 / 5154
RER B Le guichet
Voir
Student restaurant (CROUS)
Library
Sports facilities
Student residence

Contact

- **Bruno ESPAGNON**

http://www.universite-paris-saclay.fr/formation/master/physique-fondamentale-et-applications/m1-physique-voie-irene-joliot-curie