Université Paris-Saclay

Share

Email destinataire :

Vous devez renseigner un email valide

Envoyer

Une erreur est survenue. Merci de réessayer ultérieurement

Le mail de partage a bien été envoyé.

Add to Compare

M1 Mathématiques et Intelligence Artificielle

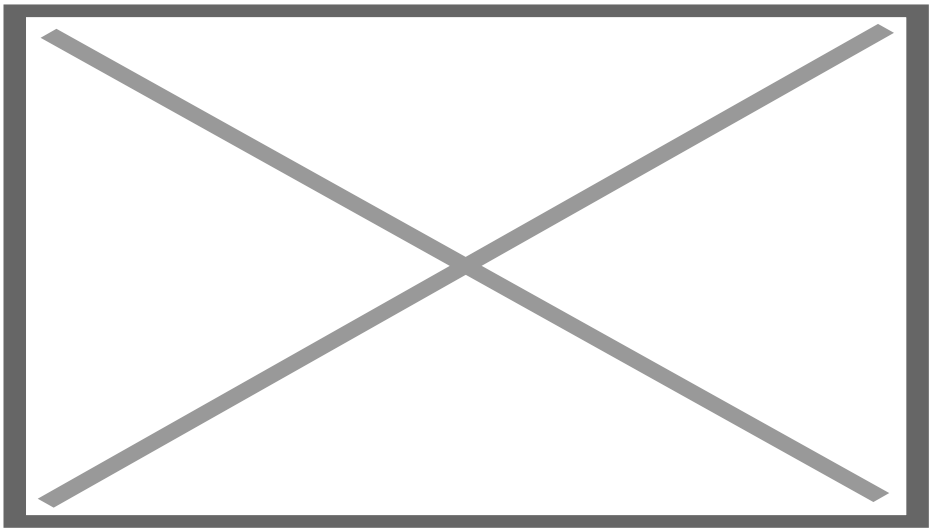
Master's degree
Specialisation Mathematics and applications
Enrolment type
Formation initiale
Formation continue
Language(s) of instruction
French

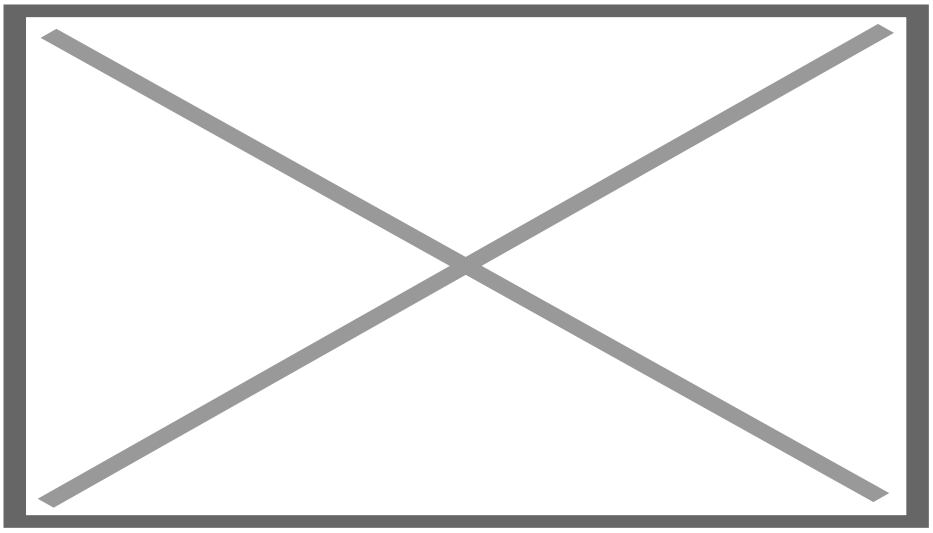
This Master's program "Mathematics and Artificial Intelligence" aims to provide students with a thorough understanding of the theoretical and practical foundations of statistical learning algorithms, and to equip them with the skills necessary for their critical analysis and implementation.

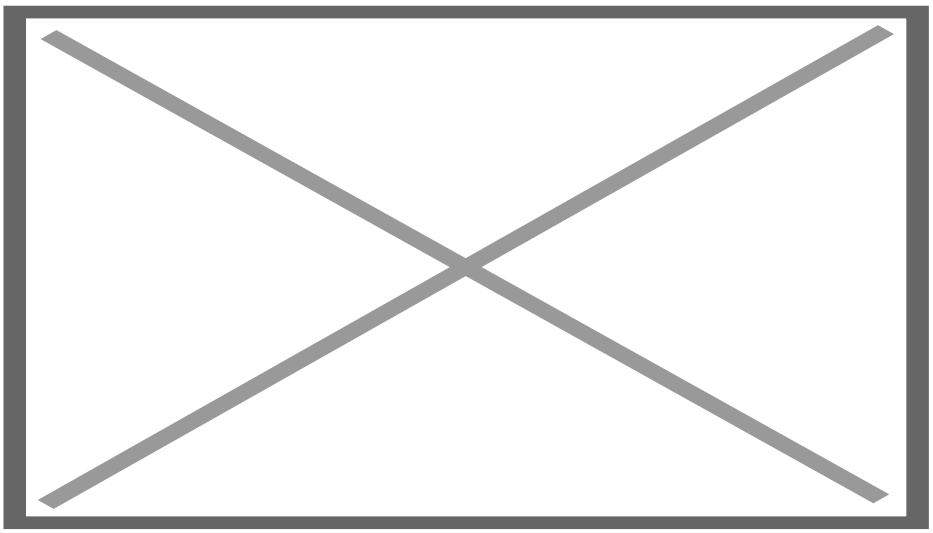
The training program focuses on developing a strong understanding of mathematical methods combined with expertise in data analysis and code development in collaborative environments.

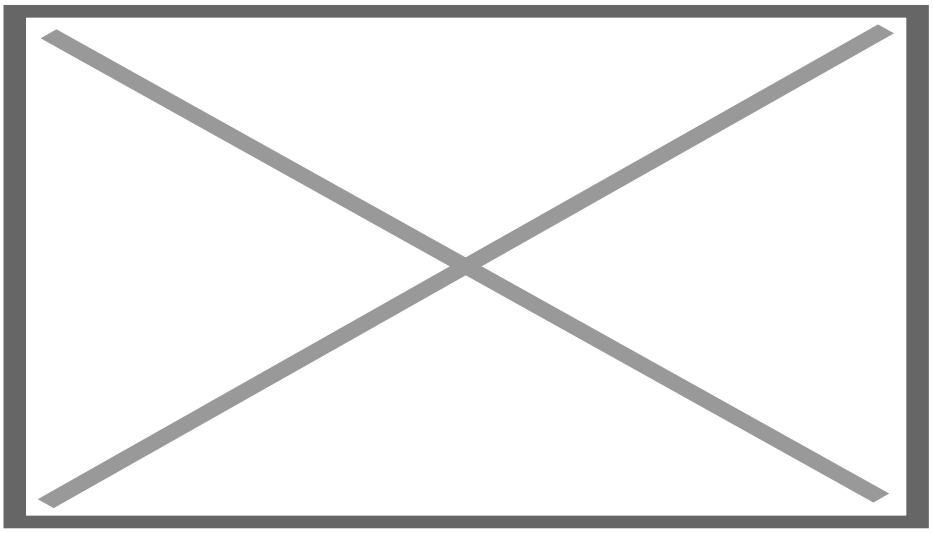
The year consists of two semesters and an internship period from mid-March to the end of August. The first semester lasts 12 weeks (September to December), and the second semester lasts 10 weeks (January to mid-March).

Télécharger la fiche détaillée
Apply Now









Information

- Overview
- Application requirements
- Schedule

Présentation

Skills

To master and implement advanced mathematical tools and methods, particularly in the context of machine learning and AI.

Objectives

The "Mathematics and AI" M1 master's program is an applied mathematics course (fundamental courses in optimization, probability, and statistics) that emphasizes mathematical analysis and the implementation of the most effective statistical learning algorithms, using appropriate computer technologies and real-world examples. The program is designed in collaboration with the world of corporate research through internships and guest lectures.

Objectives

- Acquire, understand, and master the mathematical methods and high-level learning algorithms that drive the development of artificial intelligence.
- Research master's program open to industry, aimed at training students in research developments and data scientist issues (industry representatives involved in teaching and supervising projects and internships).
- Training, including the acquisition and use of the latest AI computer tools for big data processing, deep learning, and code development in a collaborative environment (partnership with the Paris Saclay Master's in Computer Science).

For more information, please visit the website for this program.

Admission

Admission Route

Mathematics

Capacity

Available Places

25

Target Audience and Entry Requirements

- Bachelor's degree in mathematics or equivalent.
- Students with a solid scientific background at the B.A. level in mathematics or a dual B.A. degree with mathematics.
- Students with a good foundation in probability, numerical analysis, and Python programming.

Période(s) de candidature

Inception Platform

From 15/01/2026 to 16/03/2026

MonMaster Platform

From February 17th to March 16th, 2026

To find out which platform you should apply through, please see the Masters' applications and enrolment page.

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.

Additional supporting documents

Letter of recommendation or internship evaluation.

A recommendation letter is optional, but strongly advisable

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

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

Recommendation letters.

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	Lecture/practical	directed study/practical class	dis lea co
Base de données	2.5	Semestre 1	10.5		10.5				
Charger le détail									
Machine Learning avec Python	2.5	Semestre 1	10.5		10.5				
Charger le détail									
UE libre du master M1 informatique	2.5	Semestre 2	10.5		10.5				
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed	Lecture/practical	directed study/practi class
Approfondissement statistique et apprentissage non supervisé	5	Semestre 1	24		6			
Charger le détail								
UE libre semestre 2 (master math ou autre master)	5	Semestre 2						
Charger le détail								
Projet de Deep Learning	5	Semestre 2	16		8			
Charger le détail								
UE libre semestre 1 (master math ou autre master)	5	Semestre 1						
Charger le détail								
Mathématiques pour l'intelligence Artificielle 1	5	Semestre 1	48					
Charger le détail								
Mathematics for AI	5	Semester 2	40					
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	10	Semestre 2							

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dis lea c
Optimisation numérique	5	Semestre 1	18		18				

Charger le détail

Modélisation statistique	6	Semestre 1	24	12	12				

Charger le détail

Probabilités	6	Semestre 1	24	24					

Charger le détail

Pré-requis de statistique	1	Semestre 1	12		3				

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di le c
Apprentissage statistique supervisé	5	Semestre 2	24						

Charger le détail

Data Challenge de modélisation prédictive	5	Semestre 2	12		12				

Charger le détail

Séminaire enjeux éthiques de l'IA	0	Semestre 2							

Charger le détail

Langue (Anglais sauf exception)	2	Semestre 2	18						

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di le
Charger le détail									
Introduction au Deep Learning	5	Semestre 2	16		16				
Charger le détail									

Teaching Location(s)

ORSAY

Contact

- **Gilles BLANCHARD**

  PR
- **Marie-Anne Poursat**

http://www.universite-paris-saclay.fr/formation/master/mathematiques-et-applications/m1-mathematiques-et-intelligence-artificielle