Université Paris-Saclay
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M2 Control, Signal and Image Processing

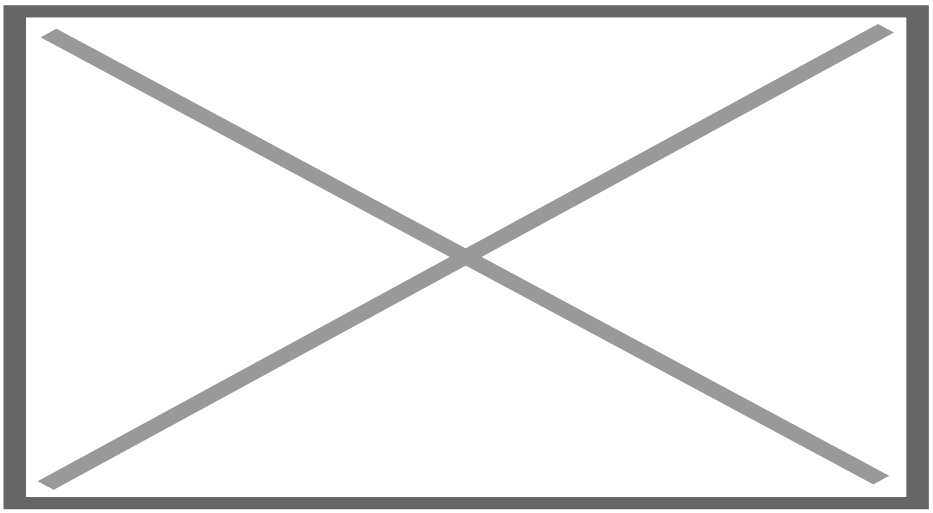
Master's degree
Specialisation Electrical Engineering
Enrolment type
Formation initiale
Formation continue
Language(s) of instruction
English
French

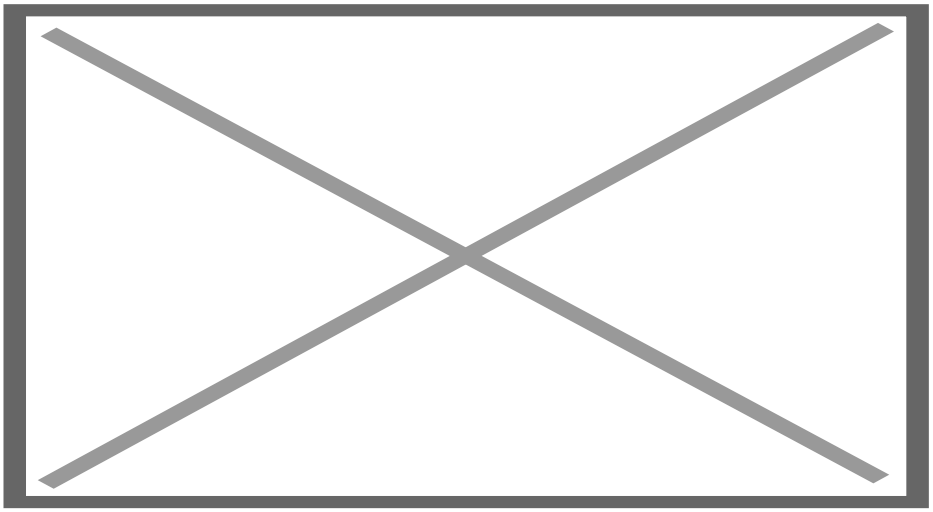
The M2 ATSI aims to train students with a **coherent program** to address academic and industrial topics in the domains of: systems and control, signal & image processing, and statistical learning and related field like machine learning.

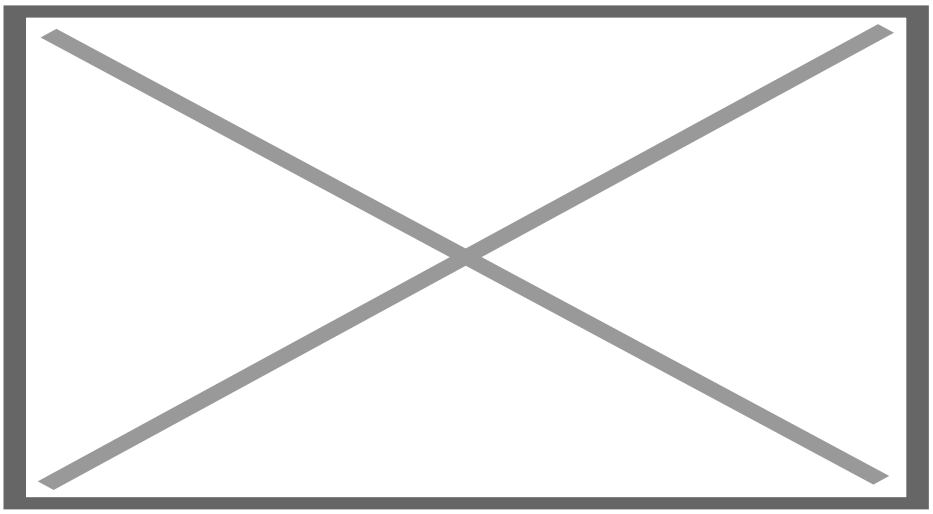
The courses focus on methodological foundations and recent developments in these fields, which intervene directly or indirectly in many disciplines such as optics, medicine, robotics, energy, automotive…

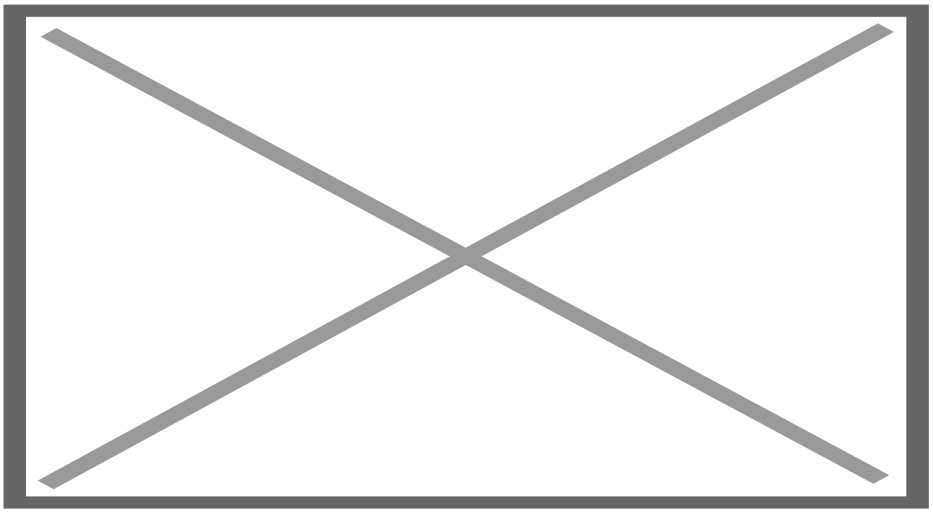
The Master's programme is organised into two semesters: the first semester consists of five compulsory teaching units covering topics useful in both automation and signal and image processing, as well as two teaching units chosen from a selection of four. The second semester consists of one compulsory teaching unit, four teaching units chosen from a selection of eight, and a work placement lasting at least four months between April and August.

Télécharger la fiche détaillée
Apply Now









Information

- Overview
- Application requirements
- Schedule

Présentation

Objectives

The objective of this curriculum is to train students to address academic and industrial research topics of a high scientific level in the domains of systems and control, signal and image processing. The courses focus on methodological foundations and recent developments in these fields, which intervene directly or indirectly in many disciplines such as optics, medicine, robotics, energy, automotive... The curriculum also trains student to research work through dedicated teaching initiatives (seminars, bibliographic work, project, etc.) and a strong involvement of the associated research laboratories.Students who follow this curriculum will have job opportunities in academic research as well as in industry. They will be able to pursue research training in the form of doctoral studies in academic or industrial environments (CIFRE thesis). They also will be able to work immediately as research engineer within industry R & D teams and specialized laboratories with needs in the areas of automation and control systems, signal and image processing or data science.This program has a dual objective: to prepare students for their doctorate and to provide them with the necessary elements to help them advance new areas of scientific research. The curriculum covers the main scientific themes that concern university laboratories and industrial companies dealing with automatic control and signal processing. It teaches the basics of methodology and recent theoretical or applied developments. These developments, which are in constant evolution, directly or indirectly intervene in numerous disciplines such as optical, electronics, statistics, economics, medicine, robotics, energy, etc.

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
After a Master's or Master's + PhD: engineer (Research & Development, control, production, etc.)

Further Study Opportunities

PhD

Admission

Admission Route

Mathematics
Physics
Science and Technology

Capacity

Available Places

50

Target Audience and Entry Requirements

The Automatic and Signal and Image Processing (ATSI) study path is part of Université Paris-Saclay's E3A programme. This study path is also open to students beginning their second year, particularly those on dual courses with engineering schools (CentraleSupélec, IOGS), or students from other national or international courses. It is thus aimed at students with a solid grounding in engineering, who demonstrate particularly good command and understanding of the theoretical aspects. It is also open to mathematics and possibly computer science students who are especially inclined towards the subject.

Période(s) de candidature

Inception Platform

From 01/02/2026 to 20/07/2026

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.

Additional supporting documents

Rank of previous year and size of the promotion.

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

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

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	di le
Optimisation	4	Semestre 1	15	9					
Charger le détail									
Estimation	4	Semestre 1	24						
Charger le détail									
Apprentissage statistique et par renforcement	4	Semestre 1	24						
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	c l
UE obligatoires									
Outils mathématiques pour l'automatique, le traitement du signal et des images	2	Semestre 1	24						
Charger le détail									
Initiation à la recherche	4	Semestre 1	24						
Charger le détail									
1 UE au choix									
Calcul scientifique	2	Semestre 1	24						
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	c
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/practic class
Commande robuste des systèmes linéaires	4	Semestre 1	20	6				

Charger le détail

Traitement du signal et systèmes d'imagerie	4	Semestre 1	18	9				

Charger le détail

Stabilité des systèmes non-linéaires	4	Semestre 1	24					

Charger le détail

Statistiques computationnelles	4	Semestre 1	18		6			

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di le
Apprentissage automatique	4	Semestre 2	12	18					

Charger le détail

Systèmes multi-agents	4	Semestre 2	18	9				

Charger le détail

Problèmes inverses	4	Semestre 2	18	9				

Charger le détail

Méthodes avancées en traitement d'image	4	Semestre 2	18	9				

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di le
Imagerie médicale	4	Semestre 2	12	18					
Charger le détail									
Commande et observation non linéaires	4	Semestre 2	15	9					
Charger le détail									
Commande prédictive	4	Semestre 2	18	9					
Charger le détail									
Systèmes hybrides	4	Semestre 2	18	6					
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	distan learni cours
Stage	16	Semestre 2							
Charger le détail									

Teaching Location(s)

GIF SUR YVETTE

Contact

- **Responsables M2 ATSI**

  Responsables et secrétariat du master ATSI

http://www.universite-paris-saclay.fr/formation/master/electronique-energie-electrique-automatique/m2-automatique-traitement-du-signal-et-des-images