Université Paris-Saclay

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M1 Materials and industrial management - Work-study programme

Master's degree

Specialisation Materials Science and Engineering

Enrolment type

Formation en apprentissage

Formation continue

Language(s) of instruction

English

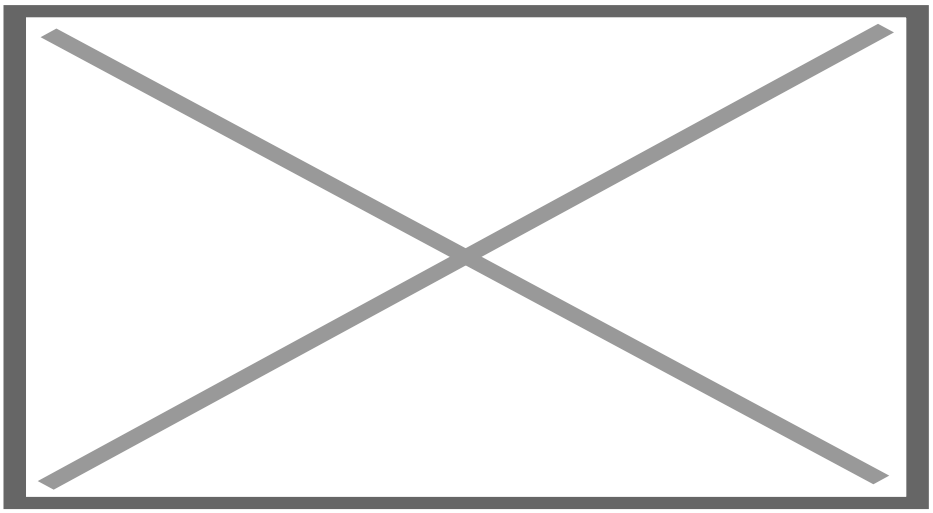
French

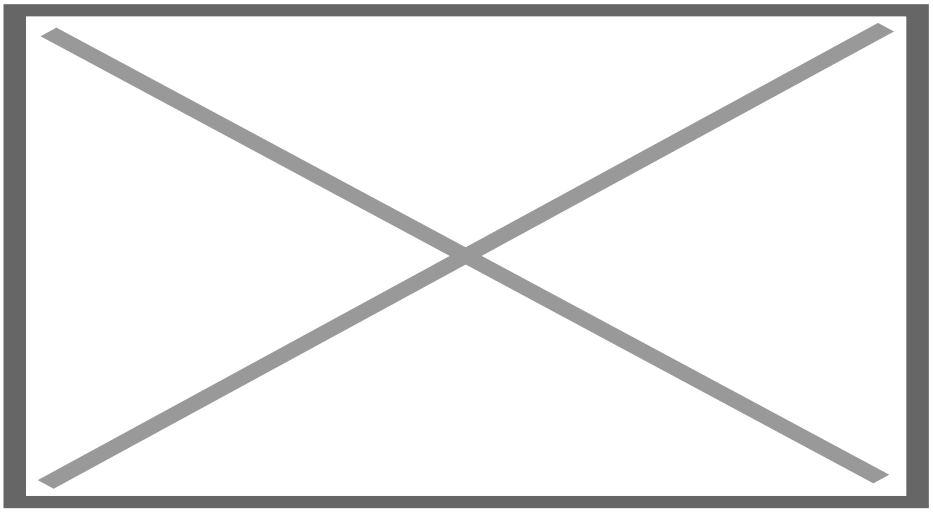
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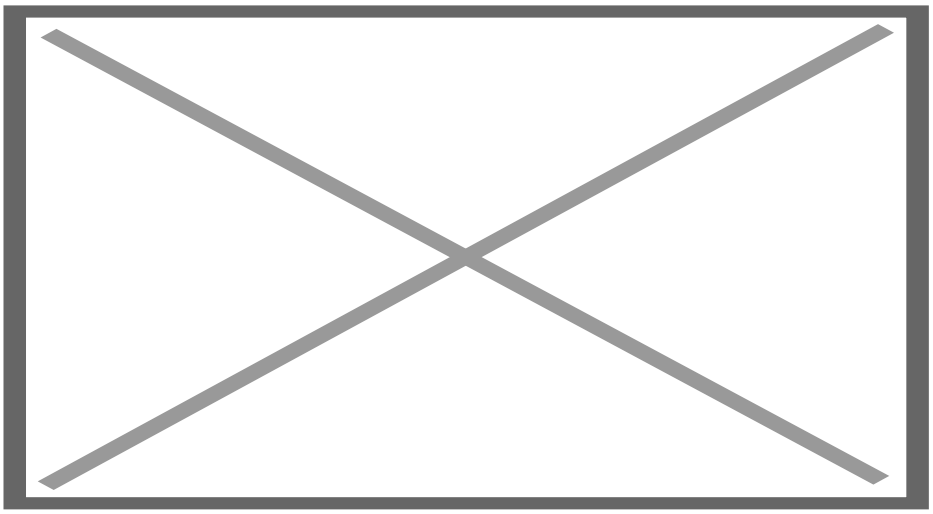
the curriculum is based on a work-study programme, alternating between the university and a company every 15 days from the end of September to April, then full-time at the company. the curriculum is organised into blocks of competencies

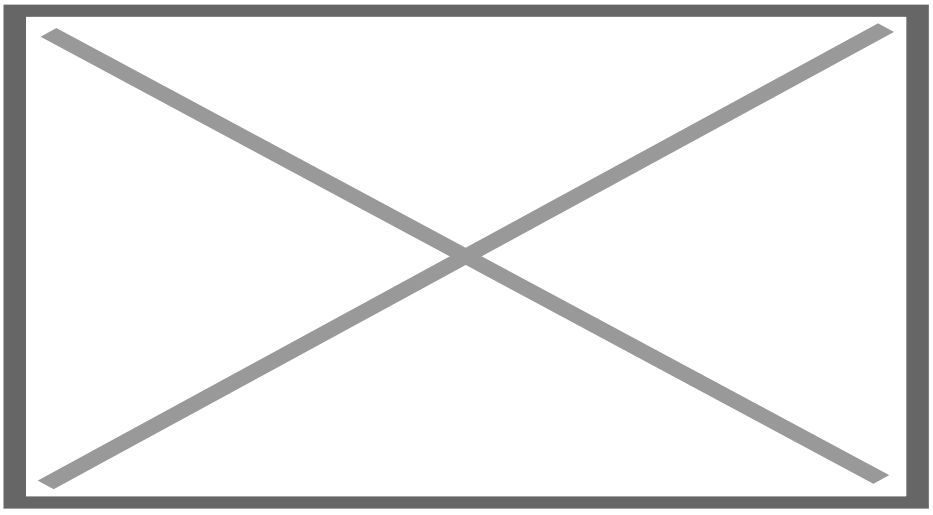
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Information

- Overview
- Application requirements
- Schedule

Présentation

Skills

(Knowledge) Master the structure-properties relationship of different classes of materials.

Objectives

This work-study-based Master's curriculum is designed to train executives at bac+5 level to design and/or produce a product under optimum conditions of cost, quality and available resources, and to join the industrial or academic world. It is organised on a work-study basis, with 15 days at the company and 15 days at the university. Successful candidates are placed on a two-year apprenticeship contract with the Centre de Formation par Apprentissage Union (http://www.cfa-union.u-psud.fr/site/index.html). The first year of the 1st year Master's programme focuses on acquiring the scientific competencies needed to master the various classes of materials. Scientific training is combined with practical work on Université Paris-Saclay's various experimental platforms, and is complemented by teaching units in business knowledge and operations (industrial management teaching unit), as well as further English language training. These courses enable students to acquire: Technical skills Design and manufacture of materials, steels, polymers and ceramics Mastery of materials characterisation tools Integration of materials into devices and products Bibliographical research Project management / Autonomy Mastery of English (preparation for TOEIC, test taken in 2nd year Master's) Methodological skills Implemention of scientific and technical competencies. Interpreting results. Drawing up a summary. Proposing and planning actions relating to a subject. Organisational competencies: Understand the structure and organisation of the company, right down to the work group Know how to work as part of a team Contribute to a collective strategy Draw up scenarios and action plans Establish priorities in line with collective objectives Organise your work, evaluate yourself Respect deadlines Personal competencies: Ability to listen, dialogue, argue, convince Ability to create synergies between individuals and departments.

Admission

Capacity

Available Places

25

Target Audience and Entry Requirements

The course is open to undergraduates with a degree in physics or chemistry.

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.

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).

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
Diagrammes et transitions de phase	4	Semestre 1	20	10				
Charger le détail								
Chimie du solide	4	Semestre 1	18	12				

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
Charger le détail								
Electrochimie / corrosion - dégradation des matériaux	3	Semestre 1	15	12				
Charger le détail								
Cristallographie - diffraction	4	Semestre 1	15	15				
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dist lea co
Science des polymeres	3	Semestre 1	15	9					
Charger le détail									
amorphes et verres	2	Semestre 1	5	4					
Charger le détail									
Introduction aux composites	1	Semestre 1	5	4					
Charger le détail									

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
Organisation et gestion des entreprises	3	Semestre 1	18	12				
Charger le détail								
Logiciels métier - Eléments finis - Python	3	Semestre 1	3		24			
Charger le détail								
Anglais 1	2	Semestre 1	11	10				
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
rapport bibliographique	2	Semestre 1		4				

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practi class
Metallurgie générale	3	Semestre 2	15	15				

Charger le détail

Couches minces	2	Semestre 2	15	12				

Charger le détail

Electromagnétisme	2	Semestre 2	15	12				

Charger le détail

Travaux Pratiques sur plateforme	3	Semestre 2			30			

Charger le détail

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dist lear co
cycle de conférences et séminaires de culture generale	2	Semestre 2	12						

Charger le détail

anglais 2	2	Semestre 2	11	10					

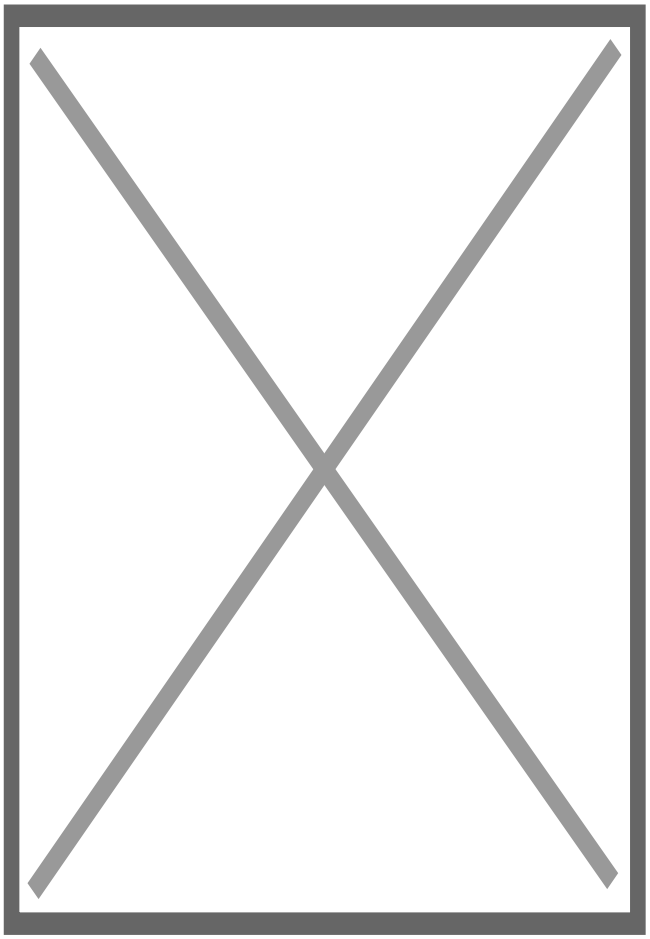
Charger le détail

Formation en entreprise - stage	15	Semestre 2							

Charger le détail

Training campus

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Orsay Bures

Orsay / Bures-sur-Yvette
Bus 4607, 4626
RER B Orsay ville ou Bures-sur-Yvette
Voir
Library
Community center

Contact

- **Raphael Haumont**

http://www.universite-paris-saclay.fr/formation/master/sciences-et-genie-des-materiaux/m1-materiaux-et-management-industriel-apprentissage