Université Paris-Saclay

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L3 Physique

Licence (Undergraduate programme)
Specialisation Physique
Enrolment type
Formation initiale
Formation continue
Language(s) of instruction
French

The third year of the Bachelor's degree in Physics at the Faculty of Sciences of Paris Saclay University (L3 Physics) is a generalist course, ranging from fundamental physics to applications in many fields. It provides the broadest possible access to various Master's degrees in Physics and admission on the basis of qualifications to the first year of many engineering schools.

The content of this programme is balanced between:

- **compulsory courses** enabling students to acquire knowledge in fundamental and applied physics
- **optional courses** partly shared with other courses in the Physics Bachelor's degree, offering an introduction to or in-depth study of topics in fundamental or applied physics or cross-disciplinary subjects
- **cross-disciplinary courses** : mathematical and computer tools, study of one or more foreign languages.

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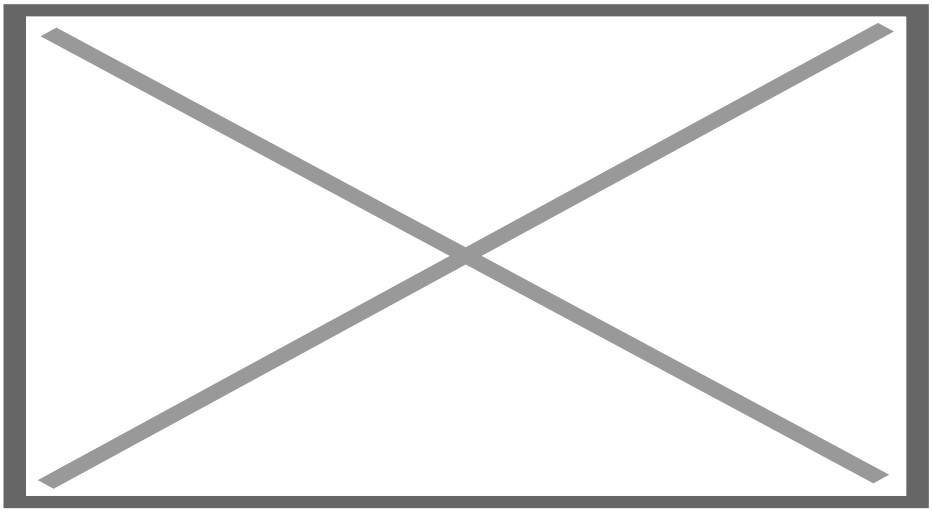

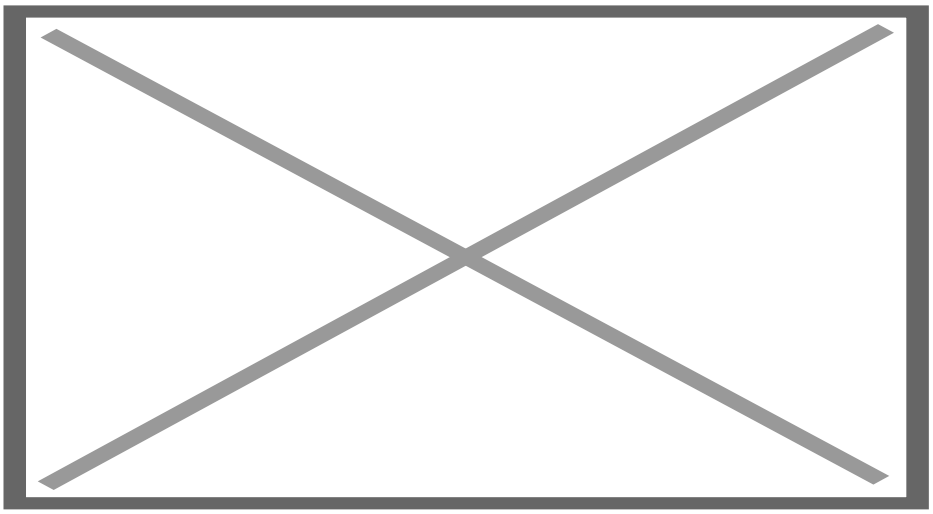

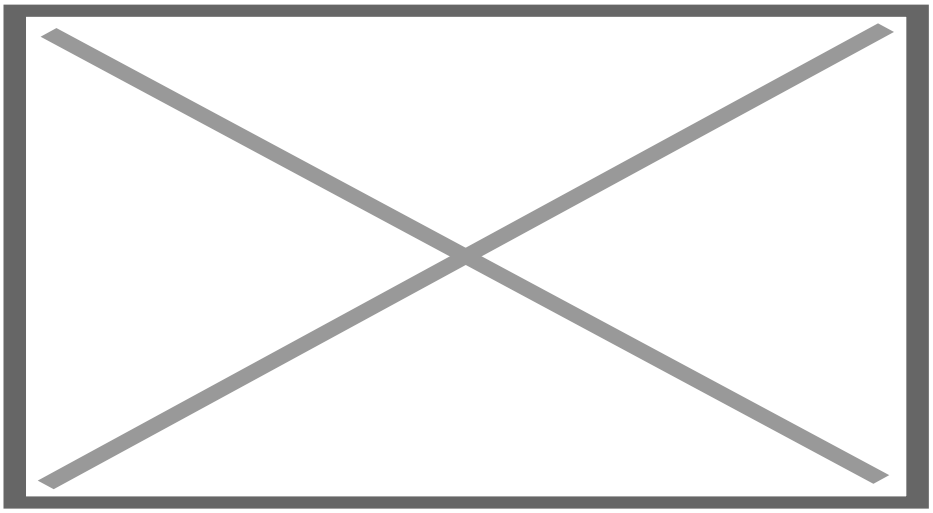

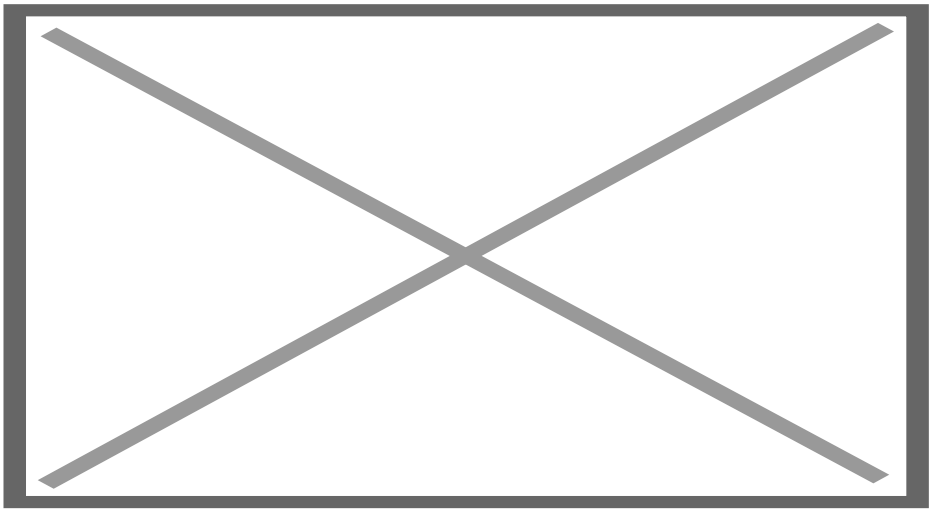

Information

- Overview
- Application requirements
- Schedule

Présentation

Skills

All students who have completed a bachelor's degree in physics acquire skills specific to the discipline as well as cross-disciplinary skills. The skills and abilities targeted by the degree are:

- Mastering the formal and practical knowledge of the discipline
- Proposing analogies, making estimates of orders of magnitude
- Knowing how to choose the theoretical, numerical or experimental tools to use
- Analysing, modelling and solving simple problems
- Mastering the mathematics used in problem modelling
- Knowing how to process numerical data and acquiring digital programming skills
- Writing a summary report and giving an oral presentation in French and English
- Carrying out a team project
- Being aware of the interactions between scientific knowledge and society
- Building and establishing a career plan

Objectives

The L3 Physics programme enables students to acquire a solid general scientific background in the various fields of physics (mechanics, optics, electromagnetism, thermodynamics, quantum and statistical physics, etc.), as well as in mathematics and computer programming.
Optional courses offered in both semesters allow students to explore more specific areas and help them to

refine their focus for master's programmes and engineering schools.

Débouchés

Career prospects

After a Master's or Master's + PhD: engineer (R&D, control, production, etc.)
After a Master's or Master's + PhD: researcher or lecturer
After a Master's or Master's + PhD: engineer (research and development, control, production, etc.) in the fields of health, pharmaceuticals, agri-food, biotechnologies, instruments and reagents, cosmetics, pollution control and the environment.
After a Master's + PhD: researcher or lecturer
After a Master's or Master's + PhD: engineer (Research & Development, control, production, etc.)
After a Master’s degree: Engineer (financial analyst, economist, statistician)
After Master and PhD : reseacher or assistant professor or professor

Further Study Opportunities

Master of Education and Teaching Professions
Engineering school
Master of applied physics
Master’s Degree in Engineering or Mechanical Engineering

Calendar

Start of programme (indicative date)
01/09/2026
End of programme (indicative date)
02/07/2027
Admission

Admission Route

Physics

Capacity

Available Places

100

Target Audience and Entry Requirements

Second-year degree in Physics or equivalent

Période(s) de candidature

E-candidat Platform

From 01/05/2026 to 08/07/2026

Programme

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
10 ECTS au choix								
Concours professorat IIIb oraux Charger le détail	2.5	Semestre 2		3	18			
Concours professorat IIIa oraux Charger le détail	2.5	Semestre 2		3	18			
Concours professorat II écrits et oraux Charger le détail	5	Semestre 2	13.5	13.5	12			
Physique nucléaire Charger le détail	5	Semestre 2	10	10	24			
Matériaux pour l'énergie nucléaire	2.5	Semestre 2	10	10	4			

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
Charger le détail Conversion électrique pour la transition énergétique	2.5	Semestre 2	12	12				
Charger le détail De l'atome au cristal : interactions, structure et dynamique	5	Semestre 2	18	18	8			
Charger le détail Géophysique	2.5	Semestre 2	16		8			
Charger le détail Astrophysique et exploration du système solaire	2.5	Semestre 2	14	10				
Charger le détail Mécanique quantique avancée	5	Semestre 2	22	22				
Charger le détail Préparation aux oraux des concours d'admission sur titre en Ecoles d'ingénieurs	2.5	Semestre 2	2	6				
Charger le détail Introduction aux méthodes physiques en médecine	2.5	Semestre 2	15	10				
Charger le détail Relativité restreinte	2.5	Semestre 2	14	10				

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class
Charger le détail								
Introduction à la physique des solides	2.5	Semestre 2	12	12				
Charger le détail								
Mathematica	2.5	Semestre 2	12		12			
Charger le détail								
Climat-Environnement	2.5	Semestre 2	12	12				
Charger le détail								
Stage en laboratoire ou en entreprise	5	Semestre 2						
Charger le détail								
Physique et sociétés durables	2.5	Semestre 2	12	13				
Charger le détail								
Instrumentation optique pour l'analyse des objets patrimoniaux	2.5	Semestre 2	12	12				
Charger le détail								
UE Libre au choix								
Langue vivante 2	2.5	Semestre 2	0	25				
Charger le détail								
Physique et sociétés durables	2.5	Semestre 2	12	13				
Charger le détail								
PPEI Conférences en L3 Physique								
Conférences en L3 Physique	1	Annualisé						
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practic class
1 UE au choix								
Thermodynamique appliquée : dispositifs et machines thermiques Charger le détail	4	Semestre 1	16	16	8			
Comportement des matériaux solides et liquides Charger le détail	4	Semestre 1	16	16	8			
Instrumentation - électronique Charger le détail	4	Semestre 1	10		30			
Concours professorat I écrits Charger le détail	4	Semestre 1	18	19				
Projet en physique numérique								
Projet en physique numérique Charger le détail	2.5	Semestre 1	8	8	8			
Anglais - FSO - L3 S5 - 2 ECTS - 1 UE parmi 6								
Anglais - FSO - L3 S5 - 2 ECTS Charger le détail	2	Semestre 1		24				
Theater workshop - FSO - S1 - 2 ECTS Charger le détail	2	Semestre 1		24				
Reading and creative writing workshop - FSO - S1 - 2 ECTS Charger le détail	2	Semestre 1		24				
Intercultural Communication EUGLOH project - FSO - S1 - 2 ECTS	2	Semestre 1		24				

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practic class
Charger le détail								
Debate Club - FSO - S1 - 2 ECTS	2	Semestre 1		30				
Charger le détail								
Writing worshop - FSO - S1 - 2 ECTS	2	Semestre 1		24				
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practic class
Mathématiques pour la physique I	3.5	Semestre 1	18	18				
Charger le détail								
Physique quantique	4	Semestre 1	22	22				
Charger le détail								
Mécanique des fluides	4	Semestre 1	18	18	8			
Charger le détail								
Electromagnétisme III	3.5	Semestre 1	18	18				
Charger le détail								
Optique appliquée	4	Semestre 1	20	20				
Charger le détail								
Calculus en mathématiques et en physique	2	Semestre 1		20				
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practic class
Enseignements expérimentaux	4	Semestre 2	8		32			
Charger le détail								

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practi class
Mathématiques pour la physique II Charger le détail	4	Semestre 2	20	20				
Physique statistique Charger le détail	4	Semestre 2	22	22				
Electromagnétisme IV Charger le détail	3.5	Semestre 2	18	18				
Mécanique III Charger le détail	4	Semestre 2	22	22				

Teaching Location(s)

ORSAY

Contact

- **Guillaume ROUX**

  MCF
- **Alexandra FRAGOLA**

  PR

http://www.medecine.universite-paris-saclay.fr/formation/licence/physique/l3-physique-0