Université Paris-Saclay
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L3 Physique

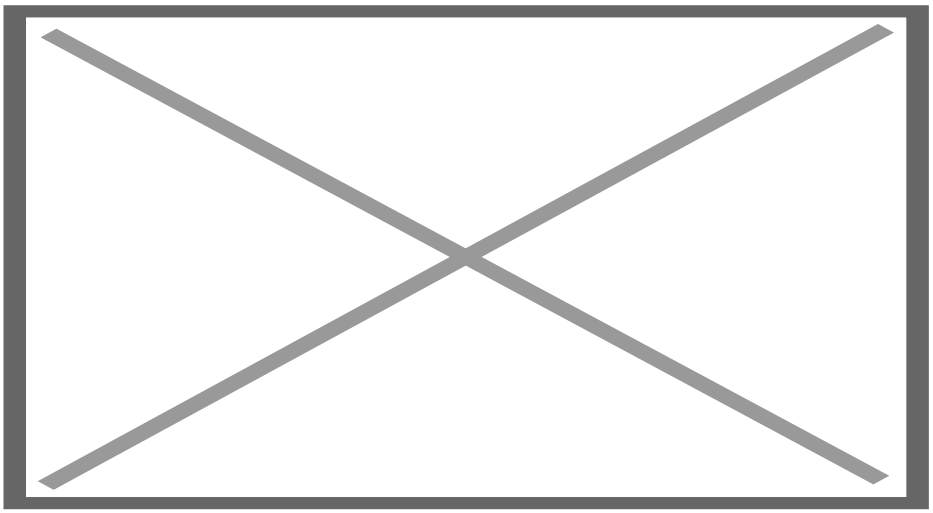
Licence (Undergraduate programme)
Specialisation Physique
Enrolment type
Formation initiale
Formation continue
Language(s) of instruction
French

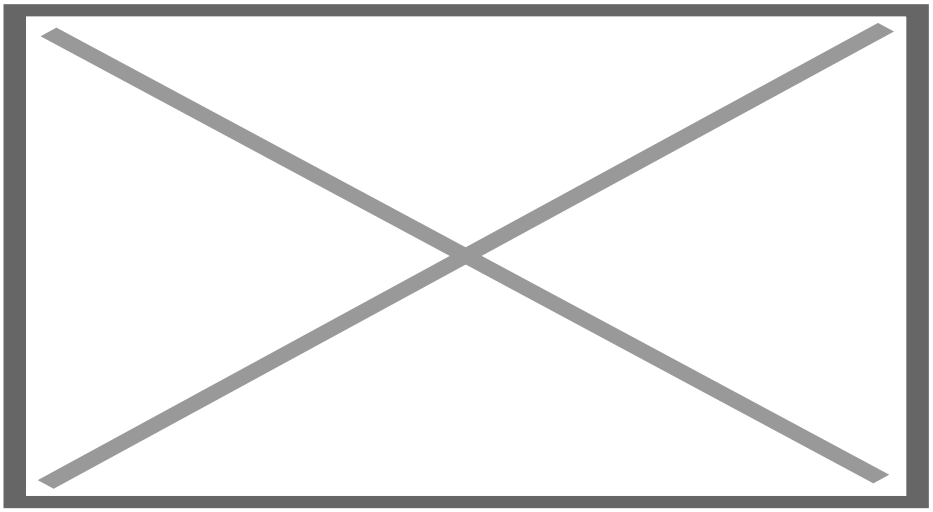
The third year of the Bachelor's degree in Physics at the Faculty of Sciences of Paris Saclay University (L3 Physics) is a generalist course, ranging from fundamental physics to applications in many fields. It provides the broadest possible access to various Master's degrees in Physics and admission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

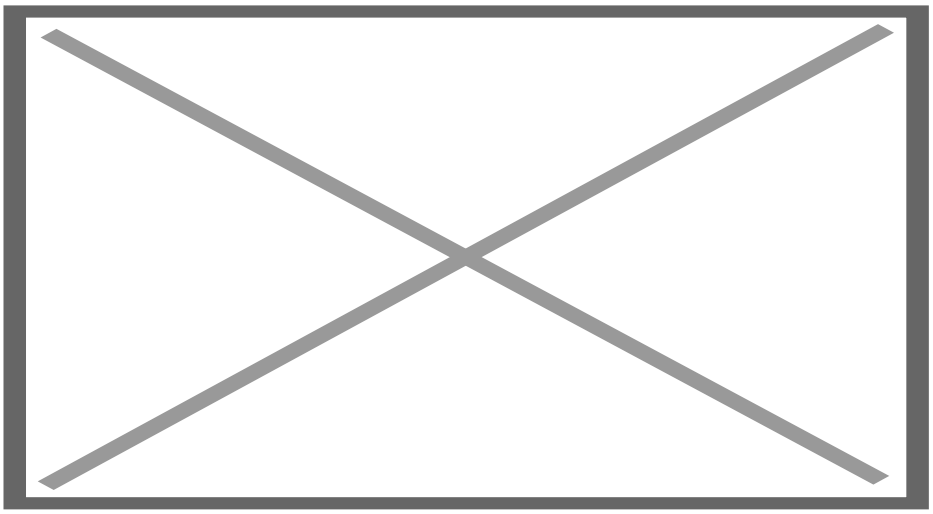
The content of this programme is balanced between:

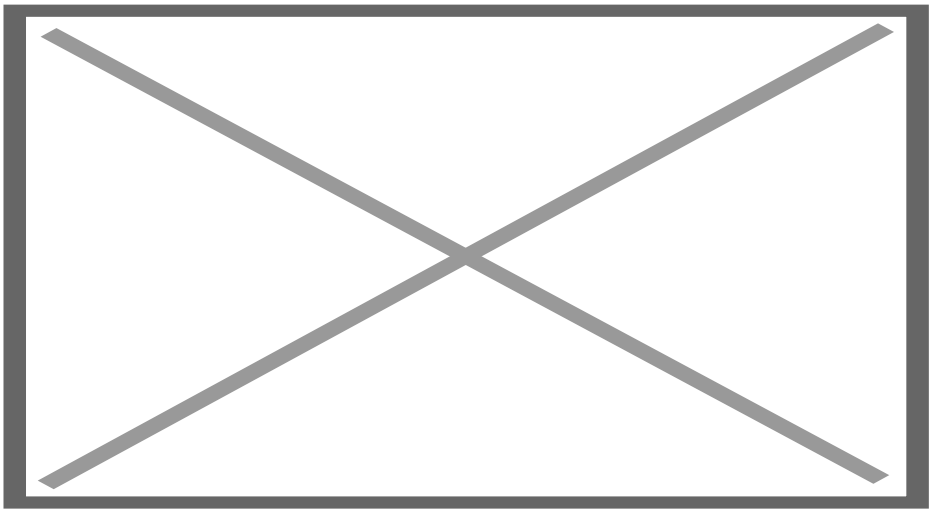
- **compulsory courses** enabling students to acquire knowledge in fundamental and applied physics
- **optional courses** partly shared with other courses in the Physics Bachelor's degree, offering an introduction to or in-depth study of topics in fundamental or applied physics or cross-disciplinary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

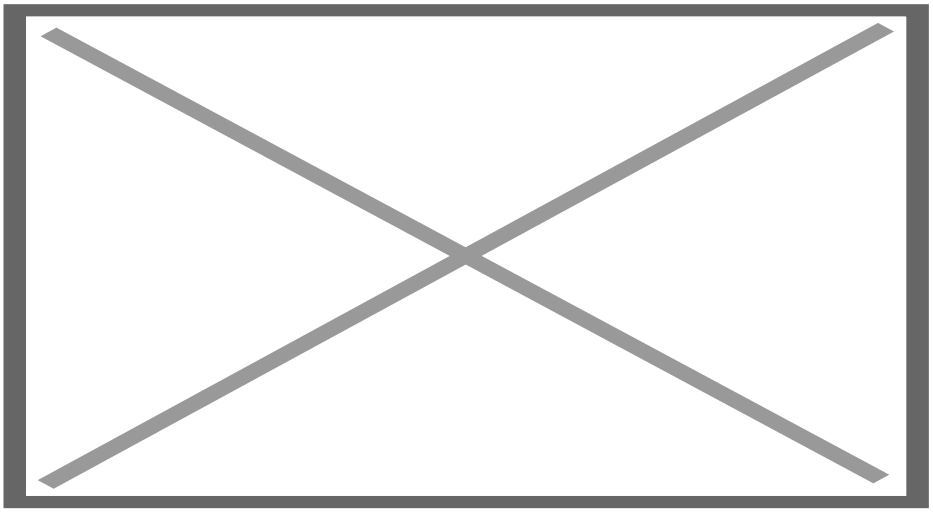
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Information

- 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 Charger le détail	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	Lecture/practical	directed study/practic class
1 UE au choix								
Thermodynamique appliquée : dispositifs et machines thermiques	4	Semestre 1	16	16	8			
Charger le détail								
Comportement des matériaux solides et liquides	4	Semestre 1	16	16	8			
Charger le détail								
Instrumentation - électronique	4	Semestre 1	10		30			
Charger le détail								
Concours professorat I écrits	4	Semestre 1	18	19				
Charger le détail								
Projet en physique numérique								
Projet en physique numérique	2.5	Semestre 1	8	8	8			
Charger le détail								
Anglais - FSO - L3 S5 - 2 ECTS - 1 UE parmi 6								
Anglais - FSO - L3 S5 - 2 ECTS	2	Semestre 1		24				
Charger le détail								
Theater workshop - FSO - S1 - 2 ECTS	2	Semestre 1		24				
Charger le détail								
Reading and creative writing workshop - FSO - S1 - 2 ECTS	2	Semestre 1		24				
Charger le détail								
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	4	Semestre 2	20	20				
Charger le détail								
Physique statistique	4	Semestre 2	22	22				
Charger le détail								
Electromagnétisme IV	3.5	Semestre 2	18	18				
Charger le détail								
Mécanique III	4	Semestre 2	22	22				
Charger le détail								

Teaching Location(s)

ORSAY

Contact

- **Guillaume ROUX**

  MCF
- **Alexandra FRAGOLA**

  PR

http://institut-pascal.universite-paris-saclay.fr/formation/licence/physique/l3-physique-0