International 1st year master program for foreign and French students

Includes also international double degree programs with Politecnico di Torino, Italy, Università di Ferrara, Italy and Tomsk Polytechnic University, Russia.

• General concepts in Fundamental Physics.
• Wide range of tracks: Particle, Nuclear and Atomic Physics, Astrophysics, Condensed Matter Physics, Optics, Lasers and Plasma Physics and Theoretical Physics.
• Large number of second year master programs on various Physics topics: [www.universite-paris-saclay.fr/fr/formation/master/physique](http://www.universite-paris-saclay.fr/fr/formation/master/physique)
• Strong link to Paris-Saclay research laboratories.
Université Paris-Saclay

https://www.universite-paris-saclay.fr/en

- Université Paris-Saclay brings together exceptional scientific potential with its institutions: universities, including Université Paris-Sud, prestigious university-level colleges and research organizations.
- Several large international companies have already located their research, development and education centers on the Paris-Saclay site (including Danone, Air Liquide, Thales and EDF) or in the Paris-Saclay business area (Alcatel-Lucent Bell Labs, Dassault Systèmes, Ipsen, General Electric).
- Université Paris-Saclay offers a wide range of courses, from bachelor's degree to doctorate, all of a high international level, within the fields of natural, human and social sciences.
- **Goal: Create a dense network in education, research and business.**
Master of Physics

The M1 General Physics is a track in the Master of Physics program:

- **M1 General Physics**
- **M1 Physique et Applications**
- **M1 Physique Fondamentale**
- **M1 Monabiphot (Photonique moléculaire pour les bio et nanotechnologies)**
- **M1 Physics for Optics and Nanosciences**
- **M1 Physique des hautes énergies**

The completion of the first year Master of General Physics allows to attend various second year Masters of Physics at the Paris-Saclay university: [http://www.m1generalphysics.u-psud.fr/spip.php?article6](http://www.m1generalphysics.u-psud.fr/spip.php?article6)
M2 admission 2015-17

• Students applied for several M2 programs
• All students that successfully had M1, have found an M2 program
• Students were admitted to several M2 programs
  – Concepts Fondamentaux de la Physique
  – Complex systems/Systèmes complexes
  – Nuclei, Particles, Astroparticles and Cosmology
  – High Energy Physics Polytechnique
  – Laser Optics Matter (LOM)/Laser Optique Matière
  – Nanosciences : International Track
  – ...

## M1 program

### Major courses
- Nuclei, Particles and Universe
- Solid State Physics
- Atoms, molecules and optics
- Statistical and Quantum Mechanics

### Minor courses
- Astrophysics and Astroparticles
- Nuclear and Particle Physics
- Soft Matter
- Plasma Physics and applications
- Complex Collective Phenomena
- Quantum Effects at Macroscopic Scale
- General Relativity and Cosmology

### Tools
- Computing tools
- Sensors, measurements and signal processing
- Mathematical and statistical methods
- Advanced mathematical methods

### Experimental Physics: Mini-experiments

### Language course: French or another language

### Seminars, Research project/Internship in laboratory
Presentation of the program
Simulation for the M1 program

- Major courses: 3 x 8 ECTS = 24 ECTS
- Minor courses: 2 x 6 ECTS = 12 ECTS
- Tools: 6-9 ECTS
- Experimental Physics: 2-3 experiments = 6 ECTS
- Language course: 3 ECTS
- Research project/training in laboratory: 6-9 ECTS

**TOTAL: 60 ECTS**
Inscription

• Your registration will be at Université Paris-Sud.
• Your master diploma will be delivered by Université Paris-Saclay.
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