

**Reference :** NPAC

**Duration :** 370 hours (1 yearm)

**Place :** INSTN paris

**Contact :**

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**Language :**

English

## Master 2 - Nuclei, particles, astroparticles, and cosmology

### TARGETED SKILLS

- Use specialised knowledge of physics with the requisite scientific rigour.
- Gather information on a scientific issue, based on the capacity identify relevant sources.
- Use conceptual, methodological, numerical, technical and practical skills and knowledge to model and solve problems in physics or related subjects.
- Carry out a physics project in an autonomous manner and produce a critical analysis of the results.
- Adapt to a new environment, work as a team and collaborate to achieve common goals.
- Communicate effectively in two languages including English, and in a manner adapted to the target audience.

### DETAILS

In the first half-year (examinations in mid-February), the basic disciplines (quantum field theory, detector physics, particle physics from nuclei to stars, cosmology and astro particles) are taught by means of lectures combined with a month of “experimental project” practical work. The second half-year starts with two weeks of in-depth instruction (option to be chosen) and practical IT work, and ends with a 14-week laboratory internship. The students are brought in contact with the world of research (lab visits, seminars, etc.) throughout the year.