

# MATERIALS SCIENCE AND ENGINEERING

## 1st year of Master's degree - Spring semester

The first year of the master aims to give a common base of theoretical and experimental knowledge in the field of materials science, necessary before any specialization.

**All students** may follow **core courses** and/or **materials science courses**.

The exchange offer corresponds to the second half of the academic year, **spring semester**. Courses take place **from January to end of March**. It is possible to start an internship in April (for at least two months, with the position to be found by the student).

A minimum of **20 ECTS** (European Credit Transfer and Accumulation System) are **required** for the **learning agreement**.

For information on the **requirements of each course**, please check the **syllabus on our [website](#) or [here](#)**

Please note that **courses** are **place-limited** and can be shared with other courses (Engineering School / other Masters)

**Courses** take place at various campuses, all located near the Panthéon and the Luxembourg Garden:

- **Chimie ParisTech-PSL**, located at: 11 Rue Pierre et Marie Curie, 75005 Paris
- **Mines Paris-PSL**, located at: 60 boulevard Saint-Michel, 75006 Paris
- **ESPCI Paris-PSL**, located at: 10 rue Vauquelin, 75005 Paris

### SCIENTIFIC TOOLS AND COMMUNICATION COURSES

MHM1SGANG2- **Language courses** ENG/FR (2 ECTS)

MH24TC.PIG- **Innovation Group Project** (3 ECTS, **only for students doing a full year exchange**)

MHM1SGPSL2- **PSL Week** (2 ECTS)

MHM1SGSTG- **Laboratory Internship\*** (**at least 2 months duration from April, only in France**) (8 ECTS)

\*position to be found by the student

### MATERIALS SCIENCES COURSES

MH24OP.MOD - **Molecular modelling** (2 ECTS)

MH24OP.ELA - **Inorganic Materials Elaboration** (3 ECTS)

MH24OP.PES - **Electronic properties of solids: From the macro to the nano scale** (3 ECTS)

MH24OP.NOR - **Inorganic Assemblies: from molecules to materials** (3 ECTS)

MH24OP.MM - **Surface properties and endurance of materials** (3 ECTS)

MHM1SGAFM - **Advanced fluid mechanics** (3 ECTS)

MHM1SGESS - **Mechanical testing to material behavior** (3 ECTS) \*

*\*Some session of this course (practical work) may also be given at the MINES PARIS – PSL Versailles-Satory Campus at: 23 allée des Maronniers 78000 Versailles*