



ParisTech



MATERIALS SCIENCE AND ENGINEERING

1st year of Master 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 (from January to March/June)**.

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**.

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**

CORE 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- **Internship** (**Lasting at least 2 months, only in France**) (8 ECTS)

MATERIALS SCIENCES COURSES

- MH24OP.MOD - **Molecular modelling** (2 ECTS)
- MH24OP.ELA - **Inorganic Materials Elaboration** (2 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)