MSc 2nd year
Atmospheric Environment

International master program
Master in Chemistry and Master in Physics

February 2018
A 1-year program training (60 ECTS)

in chemistry and physics of the atmosphere, at the highest level

**keywords**

- VOCs
- Mass spectrometry
- spectroscopy
- PM$_{2.5}$
- Atmospheric remote sensing
- soot
- air quality
- clouds
- reactivity
- aerosol
- greenhouse gases
Context
Context: international and dynamic

Students will be:

- immersed in an international environment all courses are delivered in English
- involved in events organised by the project «Laboratory of Excellence CaPPA» bringing together 7 laboratories

![Map of students' geographical origins from 2013 to 2017 - 14 nationalities represented](image-url)

Students geographical origins from 2013 to 2017

14 nationalities represented
Lille at the center of Europe
Application
Application

- **Condition**
  having completed a 1st year of Master (60 ECTS validated) in chemistry, chemical physics or physics.

- **Application form**
  available online on www.labex-cappa.fr/master-atmospheric-environment/application

- **Deadline**
  March 15th

Scholarships

- **Condition**
  available for students having the highest academic records

- **Amounts**
  each selected candidate will receive 7 000 € for the academic year (3 500 + 3 500 only if the 1st semester is validated)

- **More information**
  will be found online on the application form
Pedagogical contents
Objectives

- To understand atmospheric processes from the molecular scale to the global scale.

- To learn through a wide range of training theoretical courses, seminars, practical and lab project.

- To get professional experience through research training.

- To develop strong experimental skills (spectroscopic techniques, analytical chemistry, trace species detection, atmospheric monitoring, remote sensing ...).
Master in Physics

2 units of Physics
AE1-PHY: Electronic structure and vibration-rotation spectroscopy
AE2-PHY: Radiative transfer in the atmosphere

3 units of Chemical Physics
AE3 (5 ECTS): Physics and chemistry of the atmosphere
AE4 (5 ECTS): Advanced Spectroscopic Techniques for Environmental Analysis
AE5 (5 ECTS): Observing systems for atmospheric composition

Master in Physical & Analytical Chemistry

2 units of Chemistry
AE1-CHEM: Advanced analysis methods of atmospheric compounds
AE2-CHEM (5 ECTS): Reactivity in homogeneous and heterogeneous phases

1 unit of Language
AE6
English / French

SEPT to OCT
NOV to JAN

MSc 2nd year Atmospheric Environment
Research training in Laboratory

Full-time research position in lab involved in the Laboratory of excellence CaPPA

Chemical and Physical Properties of the Atmosphere
Job opportunities
Job opportunities

- **PhD thesis**
  wide range of offers will be available in laboratories involved in the project « Laboratory of Excellence CaPPA » (7 laboratories)

  possibility to create partnerships to offer PhD thesis with industrial or academic partners

- **Engineer in air quality**

- **Engineer in atmospheric measurements**

- **Engineer in remote sensing**

- **Network**
  Alumni network bringing together previous students of the MSc 2nd year Atmospheric Environment

  Students can also take advantage of the wide industrial and academic network of the project « Laboratory of Excellence CaPPA »
GRADUATE STUDIES IN
ATMOSPHERIC ENVIRONMENT
MSc 2nd Year

MSc in Physics
Light - Matter

MSc in Chemistry
Physical and Analytical Chemistry

SCHOLARSHIPS AVAILABLE

More information

labex-cappa.fr/master-atmospheric-environment

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