



## UNIVERSITY OF LILLE

European benchmark university, recognized for the excellence of its lifelong training, the University of Lille is setting up at the beginning of the 2020 academic year a renewed training offer in its diplomas, programs and teaching methods which places the student at the heart of his/her concerns, to encourage his/her involvement and success. It offers 195 training mentions in line with changes in the socio-economic world, backed by cutting-edge international research conducted by 62 research units in order to raise the major challenges of society.

## FACULTY OF SCIENCE AND TECHNOLOGY

The faculty of science and technology is a training and research unit of the University of Lille.

It brings 9 training departments and 27 research structures in the following areas :

- Biology ; Chemistry ; Electronics, Electrical engineering, Automatic ; Computer Science ; Mathematics ; Mechanical ; Physical ; Earth Science ; Station Marine Wimereux.

The Faculty of Science and Technology of the University of Lille offers a multidisciplinary training offer quality, from Bachelor to PhD, through professional bachelors and masters. The faculty hosts every year on the campus more than 7 000 students in initial training.

## ADMINISTRATIVE STAFF

Faculty of Sciences and technology  
Earth Science Department

- University of Lille - Campus cité scientifique
- Pedagogical Secretariat :  
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## COORDINATION OF THE PROGRAMME

Direction of the Master in Earth Sciences, Planets, Environment:  
**Catherine CRONIER**  
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Head of programme in "Paleontology-  
Paleoclimatology-Paleoenvironments"  
**Sébastien CLAUSEN**  
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## ADMISSION AND SELECTION PROCEDURE

The 2-years Master programme (120 European Credits, ECTS), taught in English, is available to students with a Licence, BSc degree (or equivalent) in Earth, life or environmental sciences.

Students willing to apply to the second year of master should have completed a first year of Master or equivalent.

Application procedure and deadlines:

- Online form 'ecandidat' (<https://ecandidat.univ-lille.fr>) opened from 18/04/22 to 13/06/22) opened from 18/04/22 to 13/06/22
- International students, please read specific information at <https://www.univ-lille.fr/home/international-student/coming-as-a-free-mover-student-without-an-exchange-programme/>
- For application procedure to the EMJMD PANGAEA, please visit <https://master-pangea.eu/application-procedure/>
- For further information about Double Diplomas, please contact [sebastien.clausen@univ-lille.fr](mailto:sebastien.clausen@univ-lille.fr)

Size of the cohorts: 8 (16 students enrolled in total, master 1+2)

Selection procedure: Evaluation and ranking of all valid applications are based on academic merit and excellence, and done according to following criteria:

- Illegibility, appropriateness of previous studies
- Academic records of previous studies
- Professional experience, internships
- Motivation letter
- Recommendation letters

Mastering of English Language. All courses of the programme are taught in English. All applicants, who are not native-speakers, must attest a B2 English level or equivalent. This can be done in a number of ways, including through an internationally recognised test such as TOEFL or IELTS, or through previous upper secondary (high school) or university studies (e.g. a letter attesting English is the medium of instruction of your higher education; a diploma in English Language).



GRADUATE PROGRAM  
'SCIENCE FOR A  
CHANGING PLANET'

Master

Master 1 / Master 2

Mention

Earth Sciences, Planets,  
Environment

**PALEONTOLOGY**  
**PALEOCLIMATOLOGY**  
**PALEOENVIRONMENT**

Accessible in: initial training,  
continuing education





MASTER MENTION SCIENCES DE LA TERRE ET DES PLANÈTES, ENVIRONNEMENT	
<b>MASTER 1 ET 2</b> parcours Paleontology - Paleoclimatology Paleoenvironment	<b>MASTER 1 ET 2</b> parcours Géologie des bassins sédimentaires (GEOBAS)

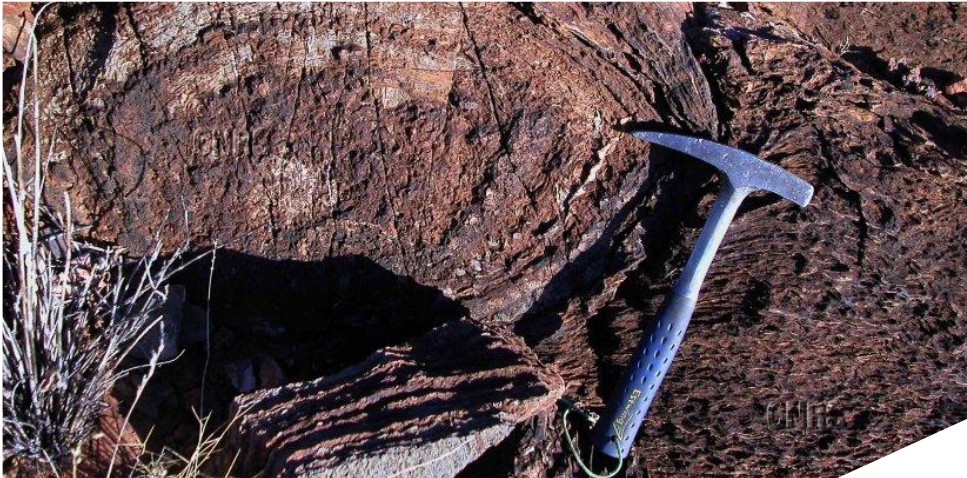
## OBJECTIVES

The objective of the programme is to train students to answer questions of interest to both academia (paleobiology, macroevolution, climate change and impact on the biodiversity...), industry (resource exploration in sedimentary basins, paleoenvironmental reconstructions), and geoconservation (development of geotourism and related economic and societal impacts, geoheritage management and conservation, cultural and scientific values).

## TARGETED SKILLS

The Master programme provides students with discipline specific knowledge, concepts, skills, habits of mind (data use and reasoning), and professional, transferable skills (communication, project management, transfer of knowledge, interpersonal collaboration...) to make them able to deal with all aspects of fundamental and applied paleontology:

- Methods of analysis, treatment, and intervention in Sedimentary Geology (sequence stratigraphy; facies analysis, characterization of geological material)
- Application of principles and technical skills for paleontological and paleoenvironmental analyses (statistics in macroevolution and paleoecology, scientific communication, geobiological processes, paleoclimatology)
- Technical skills in applied paleontology (micropaleontological and biostratigraphic analyses, industrial and environmental applications)
- Skills and methods in geoconservation (case studies in management of geological collections and geosites, regulatory protection in France and abroad, scientific dissemination, ...)



## JOB OPPORTUNITIES & FURTHER STUDIES

Careers in paleontology offer a very wide spectrum of work environments and variety of employment. After completion of this programme, students can take up a professional career. They can also integrate PhD programmes.

Students holding a Master in Earth Sciences, Planets, Environment, specialization in ‘Paleontology-Paleoclimatology-Paleoenvironments’ are qualified to work as, for example:

- Exploration geologist,
- Environmental engineer,
- Biostratigrapher, Micropaleontologist,
- Curator of collections,
- Geopark or protected-area manager,
- Science communication and exhibition manager,
- Lecturer or researcher (through a sound preparation of a PhD).

In various areas like:

- Natural resource exploration and extraction (oil-, gas and mineral prospecting)
- Environmental impact assessment and environmental monitoring
- High Education Institutions (HEI's), Geological surveys, NGO's, international companies, public and private laboratories and/or local government
- Museums, National History Museums, Protected areas, Geoparks

## THIS MASTER'S DEGREE PROGRAMME IS PART OF THE GRADUATE PROGRAMME ‘SCIENCE FOR A CHANGING PLANET’

A research-driven and interdisciplinary training in a competitive and innovative scientific environment offering research internships, international mobility grants, and professional networking for successful career planning. Graduate Programme students can actively interact with PhDs during thematic events to prepare their careers and to tackle the scientific and technological challenges of our time.

### Key figures

**8** MSc, **2** Graduate Schools, **12** Laboratories, **55** PhDs/year

### Scholarships

- 3 different scholarships are awarded by the Graduate Programme « Science for a Changing Planet » to support students’ studies (3500€/year), facilitate settling down in Lille (3500€), and foster outgoing international mobility (up to 3000€).
- deadline: 15th March 2022 (First call)
- deadline: 20th June 2022 (Second call)

More information about eligibility, criteria, and application <https://international.univ-lille.fr/graduate-programmes/science-for-a-changing-planet/bourses-etudes-mobilite-these/>

- A master degree in a stimulating scientific Environment within the Graduate Program 'Science for a changing planet' <http://www.isite-ulne.fr/index.php/fr/programme-gradue-science-pour-une-planete-en-mutation/>
- Scholarships from the Graduate Program potentially available for M1 and M2 courses.
- A programme integrated into the Erasmus Mundus Joint Master Degree Pangea "Applied Palaeontology, Palaeobiology, and Geoheritage" (<https://master-pangea.eu/>)
- Possibility to enroll in a two-year Double Diploma programme taught in English, established with our partner universities in Italy (Pisa), Sweden (Uppsala), and Russia (Novossibirsk)
- Strong networking with internationally acknowledged research-teams
- Immersion in a professionally-oriented and multicultural, international environment (about 15 nationalities have attended our master courses since 2015, guest-lecturers of 7 nationalities have also taken part of pedagogic staff)
- Up to 8 months of internship in industries, NGO's or research teams



## TRAINING'S ORGANIZATION

- The master in Earth Sciences, Planets, Environment, specialization in Paleontology-Paleoclimatology-Paleoenvironment is a consecutive, 2-years Master programme (120 European Credits, ECTS), fully taught in English. It leads to a French MSc degree sponsored by the French Government.
- The programme is backed by the 'Evo-Eco-Paleo' research team (UMR 8198 CNRS; <http://eep.univ-lille.fr/en>) and teaching staff of the Earth Science Department of Lille University.
- The units of the programme include fundamental and practical courses. They are organized around six fields of skills, know-how and knowledge (called BCC):
  - BCC1 - Development of highly specialized knowledge**
  - BCC2 - Advanced applications of digital tools**
  - BCC3 - Specialized communication for the transfer of knowledge**
  - BCC4 - Field-trip experience**
  - BCC5 - Personal professional development**
  - BCC6 - Integration of transferable skills, interdisciplinary and, or discipline-specific principles.**
- The Master thesis can be written based either on an internship in a research laboratory of a partner university or in an associate partner organization or any other company offering oriented topic for the master thesis. The defense of the master thesis is public.

### Term 1 (30 ECTS)

- BCC1 (21 ECTS)**
- Sequence stratigraphy
  - Facies stratigraphy
  - Methods of geol. material characterization
  - Geoconservation 1 Outreach
  - Introductory micropaleontology
  - Biostratigraphy
  - Applications of paleontology

- BCC 3 (3 ECTS)**
- English course or French as a Foreign Language (for Anglophone students)

- BCC 6 (6 ECTS)**
- Specialization (1 optional unit to be taken from 2 available):
    - Statistics initiation with R
    - Diagenesis petrography
  - Personal project in Geosciences (1 optional unit to be taken from 2 available):
    - Geomatics & Geostatistics applied to Geosciences
    - Geobiosphere interactions in deep time

### Term 3 (30 ECTS)

- BCC1 (12 ECTS)**
- Paleoenvironmental reconstructions 2
  - Geobiology
  - Paleoclimatology
  - Carbonate facies analysis

- BCC2 (6 ECTS)**
- Quantitative palaeontology
  - Phylogenetics

- BCC5 (6 ECTS)**
- Geoconservation 2 : Case studies & Applications
  - English scientific writing & communication

- BCC6 (6 ECTS)**
- Specialization (1 optional unit to be taken from 2 available):
    - Field training Alpes
    - Macroevolution
    - PE : Project (design) Management

### Terme 2 (30 ECTS)

- BCC1 (6 ECTS)**
- Paleoenvironmental reconstructions 1
  - Advanced micropaleontology

- BCC 3 (6 ECTS)**
- English course or French as a Foreign Language (for Anglophone students)

- BCC4 (6 ECTS)**
- Field training ou Supervised Project

- BCC5 (6 ECTS)**
- Internship Prof Experience (8 weeks)
  - Literature review

- BCC6 (9 ECTS)**
- Specialization (3 optional units to be taken from 4 available):
    - Vertebrate Paleontology, Paleobotany ;
    - Multivariate statistics;
    - Organic matter;
    - Vertical movements & Sediment flows.

### Term 4 (30 ECTS)

- BCC5 (30 ECTS)**
- Specialization (1 optional unit to be taken from 2 available):
    - Internship Professional Experience (4 to 6 months)
    - Supervised Research Project + Internship (2 months)

For more information on the national diplomas offered by the Faculty of science and technology of the University of Lille, consult the training catalog:

[www.univ-lille.fr/formations.html](http://www.univ-lille.fr/formations.html)