

Environmental Microbiology

A two-year Master's, taught entirely in English, where you do research from day one – in the heart of Montpellier's scientific community.


2 years

International Master's

100%

Taught in English

12 months

in the lab (2 × 6, M1 & M2)

8 students

per year in M1

THE PROGRAMME

Become a researcher by doing research

ENVIMIC is a track of the **IDIL (InterDisciplinary & In-Lab) Graduate Programme**, University of Montpellier – *Mention Biologie-Agrosciences*. It opens the door to a very active, internationally connected community in environmental microbiology, supported by a dense network of Montpellier research units.

You are trained through research from the start: two six-month laboratory immersions, “In-Lab” units delivered by research teams, and continuous mentoring by a scientist and an academic tutor.

The approach is interdisciplinary and multi-scale: from molecular and cellular mechanisms of microbial physiology and host–microbe interactions, to community ecology and biogeochemical cycles, to evolutionary dynamics (co-evolution, symbiosis, virulence) – combining experimental, omics and computational perspectives.

Solid foundations

Environmental microbiology and the full diversity of biotic interactions, with non-model hosts (insects, plants, animals) in terrestrial and aquatic environments.

Modern methods

Hands-on mastery of high-throughput sequencing, multi-omics, bioinformatics and biostatistics.

Interdisciplinarity

Units shared with other IDIL tracks and a multidisciplinary M2 project.

Career-ready

Preparation for research careers in academia or industry, in France and abroad.

Knowledge, skills & attitudes

Scientific knowledge Microbial diversity, physiology and biogeochemical cycles; host–microbe interactions (symbiosis, virulence, co-evolution, eco-immunology); microbial phylogeny, metagenomics and virology.	Methods & technical know-how Research from hypothesis to data analysis; bioinformatic and biostatistical analysis of sequencing/omics data; wet-lab techniques from In-Lab units; scientific writing and project management.	Transversal skills Autonomy through early lab immersion; teamwork in multidisciplinary, international settings; scientific communication in English; critical thinking and research ethics; leading a personalised research project with mentor support.
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YOUR PATH

Four semesters, 120 ECTS

YEAR 1 S7 30 ECTS • Core (12): Microbial Ecology · Integrative Biology of Microbial Interactions 1 · Microbial Phylogeny & Metagenomics · Biostatistics (3 each) • Personal Project – 10 • In-Lab – 2 · Transversal – 2 · Non-Core – 4	YEAR 1 S8 30 ECTS Long laboratory internship M1 6-month mentored lab immersion	YEAR 2 S9 30 ECTS • Core (12): Microbial Ecology 2 · Integrative Biology of Microbial Interactions 2 · Virology · Phytobiome Thematic School (3 each) • Multidisciplinary Team Project – 10 • Experimental Approaches (In-Lab) – 4 · Transversal – 4 · Non-Core – 2	YEAR 2 S10 30 ECTS Long laboratory internship M2 6-month lab immersion, typically January–July
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In-Lab units

Learn directly from research teams. Examples (may vary by year):

- Metabarcoding analysis
- Nematode microbiota
- Amoeba–Vibrio cellular ecology
- Yeast two-hybrid
- Scientific writing: from experimental data to publication

Non-Core units

Shape your profile with the IDIL catalogue. Examples (may vary by year):

- Mediterranean Ecosystems
- One Health and Eco-Epidemiology
- Sustainable Management Basics
- Other IDIL catalogue units; a microbiology-themed unit is in development

Prerequisites & student profile

- **Bachelor's degree** (or equivalent, 180 ECTS) in Biology, Life Sciences, Microbiology, Ecology or a related field, with solid foundations in microbiology, cell biology, host defense, genetics and ecology.
- **Curiosity for research** and interdisciplinary approaches, from molecular and cellular scales to ecology and evolution, and the wish to join a laboratory team from year one.
- **English level B2 or above**, as the whole track is taught in English.
- **Autonomy and motivation**: Number of places is limited (8 students/year) allowing individualised mentoring.

Career prospects

Pursue doctoral studies or step into professional life, in academic or industrial settings, in France and internationally.

PhD & research Research careers in academia, in microbiology, ecology or evolutionary biology.	Industry R&D Biotech, pharmaceutical, agri-food and environmental industries: biocontrol, bioprocesses, microbial biotechnology.
Environment & health Environmental consultancy, biomonitoring, public health / One Health and eco-epidemiology.	Platforms & policy Sequencing and bioinformatics platforms, science communication, biodiversity-related policy roles.

Partnerships & networks

Montpellier research units covering microbiology, host–pathogen interactions and microbial/environmental ecology as for example:

DGIMI IHPE MIVEGEC PHIM MARBEC ISEM HSM IPSiM IRIM CEFE

- **IDIL network**: shared teaching units and the M2 multidisciplinary project connect you with all other IDIL tracks.
- **International openness**: regular seminars by international experts from the USA, Canada, Brazil, Germany and more.

Ready to dive into the microbial world?

Join a small, motivated cohort and start your research journey in Montpellier.

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