



## More informations:

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Faculté des Sciences Montpellier



# - Master IDIL - Interdisciplinary In-Lab

*Quantitative Ecology & Evolution*

MASTER

MASTER IDIL ?  
WHAT IS IT ?



The IDIL (Interdisciplinary and InLab) master's program in Quantitative Ecology & Evolution (IDIL QEE) trains young scientists who want to answer questions in ecology and evolution using quantitative techniques (mathematical theory, advanced statistical analyses, machine learning). IDIL QEE provides interdisciplinary training at the interface between ecology, evolution and mathematics. In IDIL QEE we train you by and for research.



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# Master IDIL - QEE

## Detailed objectives:

During the first year (M1) you will follow both basic courses in ecology and evolution as well as an extensive program in statistics and mathematics with a focus on stochastic processes. IDIL QEE being a graduate program we encourage you to build a research project that spans two years with a mentor of your choice from Montpellier. Importantly, as for every IDIL MSc track, the first semester includes a "Personal Project" that represents a broad state of the art of the field of your research project. You will have a choice of InLab courses which represent short practicals on a variety of topics in ecology and evolution, as well as non-core courses from other IDIL tracks (Political Science, Management, Physics, Chemistry, etc). An academic tutor will accompany you throughout the year and help you with course choice and career development.

In the second year (M2) you will dive into the specifics of ecological and evolutionary theory as well as the mathematics of Bayesian statistics and machine learning. Since IDIL QEE values collaborations across disciplines, a highlight of your second year will be an exercise of collaborative project design and grant writing with students from other IDIL tracks.

Of course, since IDIL QEE trains you via research, both second semesters are reserved entirely for your research project with your mentor. International students are eligible for scholarships.

## Careers:

- Research in the public sector (universities, research institutes), PhD
- R&D in private and public entities
- Management and consulting
- Data analysis

## Detailed contents:

### *1st year - 1st semester:*

Stochastic processes  
Study of variability  
Analytical and numerical methods in Ecology & Evolution  
Ecology  
Evolution  
In-Labs (choice)  
Personal project  
Transversal training units IDIL (choice)  
Non-core training units (choice)

### *1st year - 2nd semester:*

6-month M1 internship

### *2nd year - 1st semester:*

Spatial Data  
Bayesian Statistics  
Machine Learning  
Eco-evolutionary dynamics  
Population Risk & Heterogeneity  
Multidisciplinary team project  
Transversal training units IDIL (choice)  
Non-core training units (choice)

### *2nd year - 2nd semester:*

6-month M2 internship