

# Master Mention Functional Biology and Ecology

Offre de formation 2022-2026

## Presentation of the Functional Biology and Ecology Mention

The FBE Masters is a **two-year international program** to train future engineers and scientific project managers in **plant breeding, plant protection, environmental impact studies, ecosystems, biodiversity and environmental remediation**. Students will study how living organisms are affected by changes in their environment and how they adapt across different levels, from molecules to cells, organisms, populations, communities and ecosystems.

Through problem-based learning and internship periods, students will be in close contact with the research laboratories of the LabEx TULIP ([www.labex-tulip.fr](http://www.labex-tulip.fr)) and the socio-economic actors of the Occitanie region.

Classes are conducted in English by professors from Paul Sabatier University of Toulouse, the University of Perpignan **Via Domitia**, as well as by **researchers** from the CNRS (French National Centre for Scientific Research), INRAE (French National Research Institute for Agriculture, Food and Environment), and from several foreign universities.

The FBE Masters is delivered by both Paul Sabatier University of **Toulouse** and the University of **Perpignan Via Domitia**.

The Master's degree aims to prepare students who wish to pursue a Ph.D. in France or abroad with the goal of becoming future professors and researchers, project managers, scientific consultants in the academic or industrial sector (biotechnology, plant improvement, land management, biodiversity, agroecology, modeling).

### M1

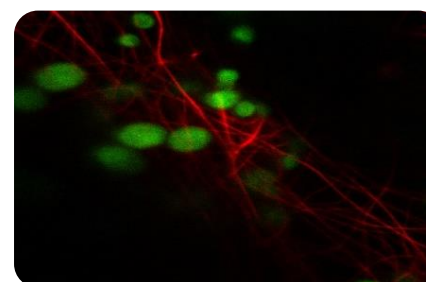
- **Integration week** : scientific communication, professional integration and careers, ethic in sciences, professional risks and prevention, mastering grant application, team building
- **Guided Tour (7 weeks)** : Students spend one week in each of the six TULIP laboratories in Toulouse, Moulis and Perpignan, for theoretical and practical training on functional biology, ecology, evolution, statistics
- **Team Construction of the "Junior Lab" Project (8 weeks)** : Working in small groups, students address problems raised by non-profit organizations, associations, natural reserves or private companies
- **Team implementation of the "Junior Lab" Project (5 months)** : Each student team will perform the experimental strategy proposed in their "Junior Lab under tutors' supervision. Teams are autonomous to organize and execute their projects.

### M2

- **Guided Tours of the International Community (2 weeks)** : Lectures, round tables and practical exercises provided by invited renowned international scientists.
- **Construction of the individual Internship Project (7 weeks)** : Students chose a topic and work with a tutor to develop a scientifically interdisciplinary internship project. Students who need to be hosted by other labs than TULIP labs will be eligible for a supplemental TULIP-GS Master Mobility Package.
- **Individual Internship and Reporting (7 months)** : Under the supervision of their tutor, students perform their internship projects. A report and oral interview in front of a jury is expected at the end of the project.
- **Team Writing of a Mini-Review Article (6 weeks)** : Working in small groups, students chose a topic and write a mini-review. A TULIP-GS jury selects the mini-review(s) deserving to be submitted to a scientific journal for publication.

## Prerequisites

- French (Licence) or foreign bachelor's degree (or equivalent) in life and/or environment sciences.
- Good level of English (written, read and spoken)



## Key numbers

- 20 students in 1st year
- 30 students in 2nd year
- 6 laboratories or academic departments involved (>700 people)



## Contacts

Teachers in Charge

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