



## Contacts

**UNIVERSITÉ DE PAU  
ET DES PAYS DE L'ADOUR**

**Collège STEE**  
*Sciences et techniques  
pour l'énergie et l'environnement*

Avenue de l'Université  
BP 1155 - 64013 PAU Cedex  
[secretariat-chimie@univ-pau.fr](mailto:secretariat-chimie@univ-pau.fr)  
05 59 40 75 03  
[https://formation.univ-pau.fr/  
m-green-eeae](https://formation.univ-pau.fr/m-green-eeae)

## Head of the graduate program

**Cédric TENTELIER**  
[cedric.tentelier@univ-pau.fr](mailto:cedric.tentelier@univ-pau.fr)

**International Welcome Desk**  
<http://univ-pau.fr/en/welcome-desk>

## Access to graduate program

### Requirement

- The GREEN Graduate school is open to high-potential students from a variety of scientific backgrounds who have completed their undergraduate training with the highest honors (special fees could be offered to promising candidates) and are highly motivated for a dedicated research-focused PhD-Track.
- Applicants must hold a Bachelor in Biology/Ecology. Eagerness for research is crucial, and endorsement by a research laboratory prior to application is much appreciated.
- Applicants must be fluent in English, both in writing and speaking. A non-native English candidate must pass an internationally recognised English test or an English interview with our lecturers. Minimum required score CECRL B2 level in English.

### Apply

- Application on Mobility online: <https://ri.univ-pau.fr/m-programs>

## Assets

- Scholarships
- Training in English
- More than one third of ECTS acquired in research
- Integrating research laboratories right from the 1<sup>st</sup> semester of M1
- Student-centered learning
- Multidisciplinary (Chemistry, Physics and Biology)
- Post-graduate studies with a PhD thesis - if the criteria of excellence are recognized
- Tutorship and tailor-made programs: each student will have a tutor with whom s.he will build her/his curriculum related to his aspirations and research interest. The tutor will also help the student define a series of face-to-face or e-learning courses (up to 20 or 25% for the STEE GP) that s/he can easily keep up with.



Conception : Direction de la communication - Impression : Centre de reprographie - UPPA - Photo de couverture : (c) INRAE - GUSE - Décembre 2023

GRADUATE SCHOOL GREEN

**Graduate  
program  
EEAE**

**Evolutionary  
Ecology in Aquatic  
Environments**



<https://formation.univ-pau.fr/m-green-eeae>

# Presentation

Graduate program GREEN is a 5-year integrated Master's/PhD program of excellence linked to the research fields of Energy and the Environment with research-intensive training in multiple fields.

The GREEN graduate school (GRaduate school for Energetic and Environmental iNnovation) aims to train tomorrow's research managers, for them to be enlightened about the challenges of energy and the environment, capable of understanding their complexity and proposing innovative solutions to face the challenges of transitions.

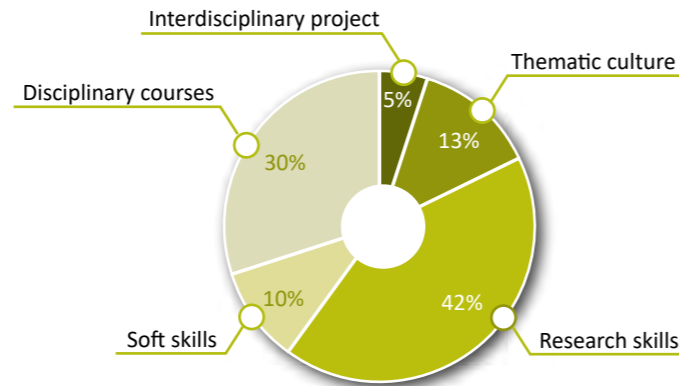
## Research-based approach

The program is carried out in close interaction with the UPPA/INRAE ECOBIOP laboratory ([ecobiop.com](http://ecobiop.com)) and its national and international research partners. Applicants already in contact with other research groups are welcome.

# Graduate program

## Interdisciplinarity and Research immersion in laboratories

In order to promote transversal and interdisciplinary activities, all the Graduate Programs proposed by GREEN are identically structured. In addition to the research training which represents 40% of a Master's credits, the courses offered in each GP are a combination of common thematic culture courses in the field of Energy and Environment (Sustainability Science, Resilience Alliance, Ecological Economics and Political Ecology, Health & Ecotoxicology, Energy Law & Policy.....) and basic soft skills completed by fundamental and specialized disciplinary courses to fit with the research or topic interest of the students.



## Training by project

The research-based training program of our GREEN project follows the active educational approach of "student-based learning". The aim is to guide our students and help them structure their research and innovation projects, while giving them a great deal of autonomy.

In the second year, there is therefore a significant reduction in the number of face-to-face courses in favour of project-based learning, in order to put students in a professional situation so that they can experiment group work and project management. This framework encourages a strong interaction between students, lecturers, and researchers to ensure an easier integration into the host research laboratories. The interdisciplinary project proposed in the third semester should give students from all the graduate programs an opportunity to produce joint, multidisciplinary work.

$$\Delta z = \frac{1}{W} \text{cov}(w_i, z_i) + \frac{1}{W} E(w_i \Delta z_i)$$



Kerguelen - ©INRAE - Labonne

# Graduate program EEAE Evolutionary Ecology in Aquatic Environments

Aquatic ecosystems are both highly diverse and threatened by anthropogenic disturbances such as pollution, global change, eutrophication, harvesting, habitat loss, fragmentation. These disturbances can have selective effects, or interact with selective factors, in a way that can impact evolutionary processes. As these processes may either promote population resistance/resilience through adaptation or accentuate the threat through maladaptation, understanding evolutionary forces at work in natural and disturbed aquatic environments is paramount to assess the fate of biodiversity, and manage it in a sensible way on the long term.

This graduate program aims at training scientists who will be able to apply fundamental knowledge on evolutionary ecology in order to tackle the challenge of human-driven loss in biodiversity. As evolutionary processes may be difficult to document and are still not widely accounted for in the management of aquatic ecosystems, the graduate program is strongly research-oriented. The disciplinary courses will deal with theoretical aspects of evolutionary ecology and empirical methods linked to its study in aquatic ecosystems. Through individual and group projects, students will mix fundamental knowledge and management application to reach their own blend of evolutionary ecology in aquatic environments.

## Opportunities

### Sector

- Evolutionary ecology
- Adaptation to global change
- Biodiversity management
- Fisheries regulation

### Fields

- Research
- R&D structures

### Positions

- Lecturer
- Researcher
- Project manager