



Contacts

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

Collège STEE

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

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m-green-mine](https://formation.univ-pau.fr/m-green-mine)

Coordinators

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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 stipends could be offered to promising candidates) and are highly motivated for a dedicated research-focused PhD-Track.
- Applicants for the 1st year of Master's degree (M1) must hold at least a Bachelor's degree in Chemistry, Biology or Physics.
- Applicants for the 2nd year of Master's degree (M2) must hold at least a 4-year university degree in Chemistry, Biology or Physics
- 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 on line: <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 1st 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 with his curriculum related to his aspirations and research interests. 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.

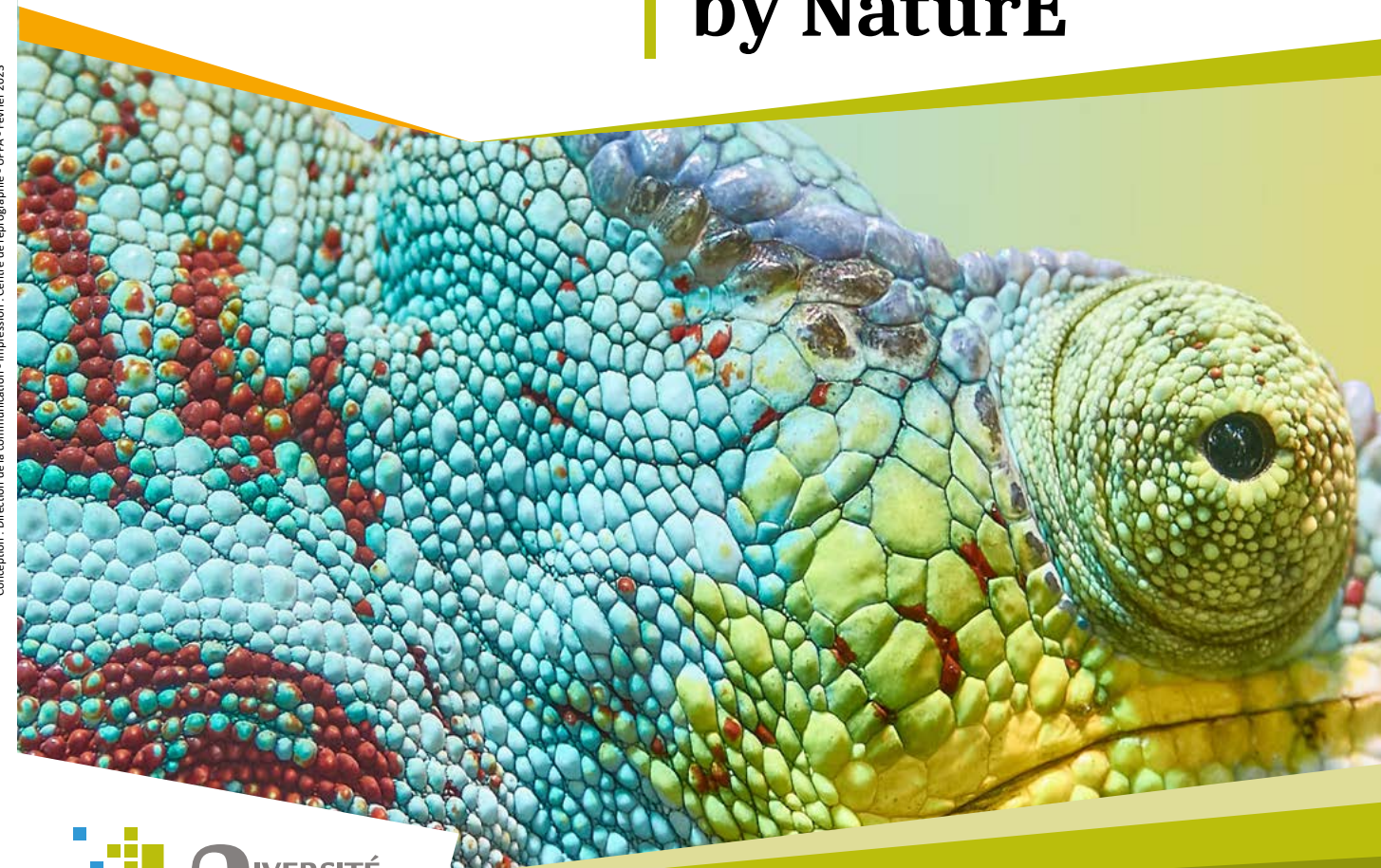


Conception : Direction de la communication - Impression : Centre de reprographie - LUPPA - Février 2023

GRADUATE SCHOOL GREEN

**Graduate
program
MINE**

**Materials
Inspired
by Nature**



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

Presentation

In 2022-2023, the UPPA is opening 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.

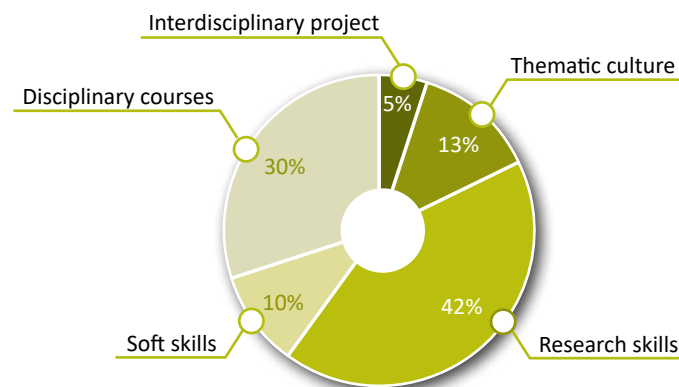
Research-based approach

The program is carried out in close collaboration with the IPREM - Institute of Analytical Sciences and Physical Chemistry for the Environment and Materials.

Graduate program

Interdisciplinarity and Research immersion in laboratories

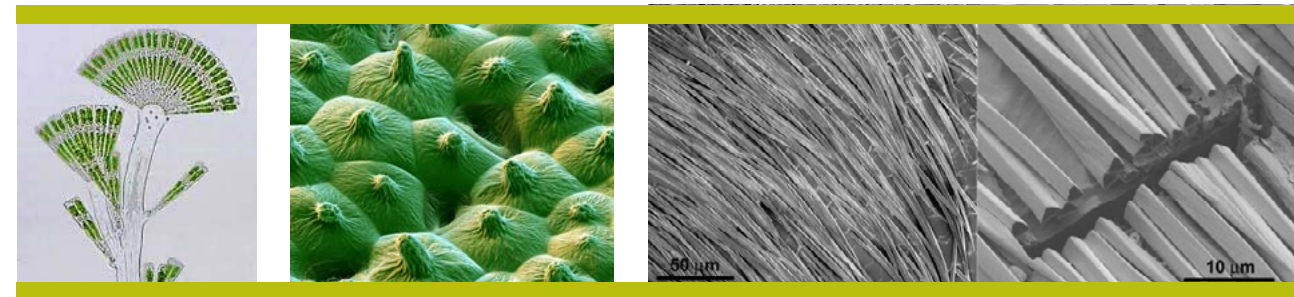
In order to promote transversal and interdisciplinary activities, all the Graduate Programs proposed by GREEN are identically structured. In addition to the research training which represents 40% of a Master's credits, the courses offered in each GP are a combination of common thematic culture courses 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 of interest of the students.



Training by project

The research-based training program of our GREEN project follows the active pedagogy educational approach of "student-based learning". The aim is to guide our students and help them to 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.



Graduate program MINE Materials Inspired by Nature

This GP aims at offering an educational background to enable a connection between the laboratory and the living world in line with the current challenge of the ecological and sustainable transitions.

Mimic strategies evolved by Nature represents infinite scientific and technological challenges that will be undertaken by choosing bioinspiration and biomimeticism. With this GP, unique in France, we aim at proposing to the students to explore living systems to get inspiration to develop novel materials and to keep in mind ethics and consciousness of their environment. Multi- and trans- disciplinarily training, at the heart of the biomimetic approach, will enable the students to adopt new ways of thinking syntheses, formulations and processing of tomorrow materials needed by the industrial partners to build our future society. In both the first and the second years of the program, the students will be trained to draw inspiration from nature through a biomimetic approach. This multidisciplinary approach, which resorts to both fundamental science and materials engineering is based on the observation and comprehension of living organisms within their ecosystems. A strong effort of abstraction to establish biological models to be adapted to scientific concepts and technological developments will be key to the lectures.

Opportunities

Sector

- **Chemistry** : bio-surfactants, biopolymers, bio-sourced materials...
- **Energy** : photovoltaic, batteries, fuel cells, artificial photosynthesis...
- **Environment** : non-polluting materials, pollution control materials and storage, crop protection, agriculture sensing...
- **Aeronautics** : composite materials, surface treatments...
- **Building** : thermal and sound insulating coatings/materials...
- **Cosmetics, healthcare & life science**

Fields

- Research and Development

Positions

- Project Manager
- Senior manager in design and development
- Senior manager in production
- Senior manager responsible for quality operations or even production management
- Technical Director (R&D)
- Teacher-researcher