



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-physique@univ-pau.fr
05 59 40 75 03

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

Coordinators

Rémi Dedryvère
remi.dedryvere@univ-pau.fr

Corinne Nardin
corinne.nardin@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 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 should master the fundamental concepts of one main disciplinary field (chemistry, biology or physics) and have related knowledge of at least one secondary disciplinary field among the two other ones.
- 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.
- Topics of high industrial and societal interest.
- 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 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 MINEST

Materials Inspired by Nature and for Energy and Sustainable Technologies



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

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.

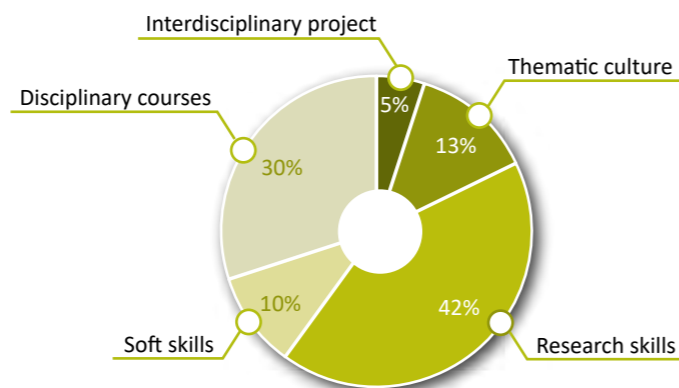
Research-based approach

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

Graduate program

Interdisciplinarity and Research immersion in laboratories

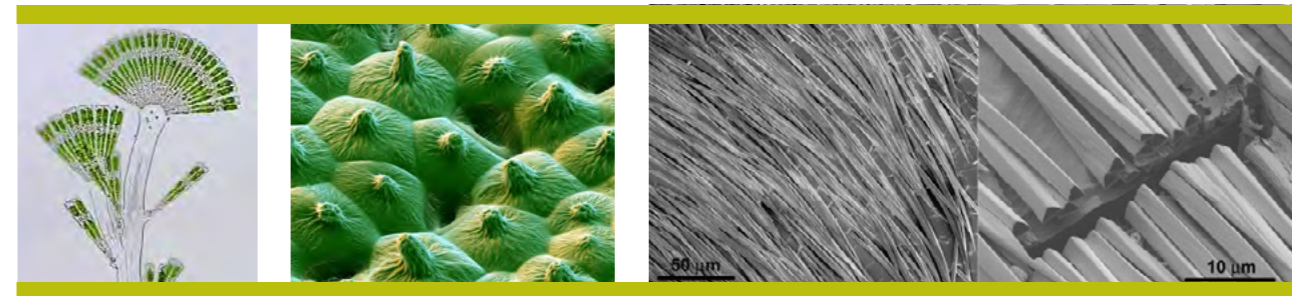
In order to promote transversal and interdisciplinary activities, all the Graduate Programs proposed by GREEN are identically structured. In addition to the research training which represents 40% of a Master's credits, the courses offered in each GP are a combination of common thematic culture courses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

Materials Inspired by Nature and for Energy and Sustainable Technologies

This GP aims at offering an educational background to enable a connection between the laboratory and the industry in line with the current challenge of energy and sustainable development.

Materials are central to our daily life. They are used in numerous fields of economic activity and industrial applications. The different ways to design materials and to use them in different sectors have significantly evolved in the last decade to answer the societal demand in terms of sustainable development. Bio-sourced materials (e.g. from marine and terrestrial vegetal sources) tend to replace petroleum-based materials. Bio-mimicry and bio-inspiration are new approaches to design innovative materials (nano- or hierarchically structured) or to produce energy by bio-inspired processes (e.g. conversion of photon energy). New composite or nano-composite materials are designed considering their life cycle analysis and recycling processes. Energy storage/conversion is a key concern of our modern societies, and specific materials for batteries, photovoltaic cells, or hydrogen production and storage are also addressed in this graduate program. All the listed topics constitute the teaching basis of MINEST graduate school. By choosing their optional courses, master students will deepen their skills and knowledge in one specific field.

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)
- Academic researcher