

Contacts

Location

UNIVERSITÉ DE PAU
ET DES PAYS DE L'ADOUR

College of Sciences and Technology
for Energy and Environment
Pau Campus - France

More information (Fees and charges...)

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

Coordinator

charles.aubourg@univ-pau.fr

Admission Office

master.programs@univ-pau.fr

How to apply

The application documents must be
uploaded on the website:
<https://ri.univ-pau.fr/m-programs>



Admission requirements



Academic requirements

Applicants must hold a Master of Engineering in fields such as
petroleum engineering, geosciences and/or physics.

Admission requirements

Students must have a Master Degree and must be ranked in the top
20%.

English Language Requirements

Minimum required score: CECRL B2 level in English

Detailed Program Facts

Academic Year: Our full academic year runs from September to
June

Application: Applications are open from November to March 31st

Program intensity: Full-time

Duration: 1 year

Credits: 60 ECTS

Language: Fully taught in English

Level: Master's degree

Master's
degree
GEOENERGIES

Geoengineering



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



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Overview

The Geoenery Master's degree offers students a classical 2-year training in French, and a 1-year training in English for foreign students who already have a graduate level. The one-year Geoengineering program offers about 270 hours of courses and a mandatory 5 to 6 month internship in a company or research laboratory. It is therefore an appropriate course for students who wish to strengthen their skills in the field of geosciences or in the field of engineering sciences applied to the study of geoenery. More specifically, the student will perfect his or her skills in the characterization of geological reservoirs, new geoeneries, their extraction, but also their storage.

This Master benefits from a particularly rich environment in geosciences and energy.

The Master is part of the Faculty of Sciences and Technologies for Energy and Environment (STEE). The STEE Faculty has been founded within the framework of the prestigious label I-SITE which granted the project Energy Environment Solutions (E2S).

It also benefits from the immediate surroundings of Carnot ISIFOR (Sustainable Engineering of Georesources) and a national pole for Geosciences and Innovation (Avenia). In addition, Pau hosts dozens of Petroleum companies, including Total, Terega, Modis, etc... Pau has therefore one of the highest concentrations of petroleum engineers and scientists in France.

Student Learning Outcomes

At the end of the Master's program, depending on the options chosen, the student will be able to:

- **If he/she follows a geosciences oriented path for geological reservoirs:**
 - Acquire and process geological, geophysical, and geochemical data to better constrain the geological reservoir;
 - Understand the challenges of numerical modelling
- **If he/she follows an Engineering Sciences oriented course**
 - Simulation and optimization of reservoirs,
 - Reservoir monitoring,
 - The characterization of produced or stored fluids.

Opportunities

Sectors

- Petroleum companies
- Energy companies
- Geosciences companies
- Environmental companies
- Geothermal companies

Fields

- Research
- R&D structures

Positions

- R&D Engineer
- PhD student

44% of graduates are currently employed
33% are pursuing their studies with a PhD
30 months after graduation (class of 2019)

Organisation

The 'Geoengineering' course aims to offer complementary skills to a student in the field of geoenery in geological reservoir systems. It is specifically aimed at engineers who want to complete their initial training, either after a professional interruption, or simply, in the pursuit of a graduate degree. This one-year customized training course is based on teaching modules existing in the two geoenery Master courses (Geophysical Geology for Geoenery G3, Engineering Sciences for Geoenery SG).

In the G3 course, the student will be able to reinforce among others:

- Geophysical characterization (acquisition and processing of seismic data)
- Geological characterization of reservoirs (analysis of basins, deformation)
- Logging
- New gases

In the SG course, the student will be able to reinforce himself/herself among others:

- On reservoir simulation,
- Resource evaluation
- Monitoring of injected fluids.

Program

Mandatory

- Health, Safety, and Environment
- Geological storage and environment
- The new green gas
- French as a foreign language

Optional

- Well performance
- Injection
- Application case Reservoirs
- Industrial code
- Multi-scale modelisation

- Advanced computering school
- Application Case Production
- Application case Geosciences
- Well logging
- Rocks physics for Geoenery 1
- Data processing and inversion
- Fluid & geo resources 2
- Fractured Reservoirs and Risks
- Field trip Fracturation
- Rocks physics for Geoenery 2
- Geostatistics

Research internship

This internship is intended to offer students the opportunity to apply a scientific approach and project management methodologies for an academic or industrial research project (of duration from 5 to 6 months).

Note that a minimum grant of ~670€/month will be provided if the student is doing his internship in France.