SCIENCES, TECHNOLOGIES AND HEALTH

Georesources

Master in Earth, planetary and environmental sciences

Duration
2 years

Component
UFR PhITEM (physique, ingénierie, terre, environnement, mécanique)

Language(s) of instruction
English, French

Presentation

To meet the energy and material demands of the 21st century, sustainable exploration of our planet's resources is necessary, managed by exploration specialists with solid knowledge in geology and geophysics. The Georesources program has been created to respond to this need. The training is organised over two years with a series of modules in common with other programs in the specialisation, as well as modules specific to this program. Training in the field, in a company or in a research laboratory plays a key role in this program.

The aim of the Georesources program is to train students in geology and geophysics, with a view to working in research and/or the private sector in mining exploration or energy resources.

The Georesources+ option gives students the opportunity to take additional courses in the economics of energy and resources, offered by the master in Economy for energy and sustainable development.

International education : Internationally-oriented programmes

International dimension

The program has a strong international focus, with teaching mostly in English and internship opportunities in a company or in a research laboratory abroad. Several foreign students are welcomed onto the program every year.

Organisation

Abroad intership : In France or abroad

Admission

Access conditions

- The 1st year is open to students who have obtained a national diploma equivalent to a bachelor degree (licence) in a field compatible with that of the Master, or via a validation of their studies or experience
- Entry to the 2nd year may be selective. It is open to candidates who have completed the first year of a master in the field, subject to a review of their application

Public continuing education : You are in charge of continuing education :

• if you resume your studies after 2 years of interruption of studies

• or if you followed training under the continuous training regime one of the previous 2 years

• or if you are an employee, job seeker, self-employed

If you do not have the diploma required to integrate the training, you can undertake a validation of personal and professional achievements (VAPP)

Candidature / Application

For candidates whose country of residence is not included in the "Studies in France" portal (PEF) scheme, the calendar for the eCandidat application campaigns is available here

You want to apply and sign up for a master ? Please be aware that the procedure differs depending on the diploma you want to take, the diploma you have already obtained and, for foreign students, your place of residence.Let us be your guide – simply follow this link

Target

- Students in initial training who have obtained a bachelor degree (licence) in Earth, physical, or mechanical sciences
- Foreign students wishing to pursue their studies in the georesources field in France
- Students in continuing education wishing to pursue advanced studies in the georesources field

Fees

Tuition fees 2019-2020 : 243 €

Students

Prerequisites

This course is intended for students in geosciences with a strong interest in working in the exploration of mineral resources and hydrocarbons. Students either have solid experience in geology with extensive field experience, or a good background in physics and mathematics. As this program gives students a dual competence in geology and geophysics, both groups of students can take advantage of this course.

And after

Further studies

This course prepares students either to continue in the private sector working for a mining or oil company or in the services sector of this industry, or to go on to do a doctoral thesis. The skills acquired in this course will provide the student with the experience needed to successfully pursue either of these two directions.

Reorientation

A reorientation to the Geodynamics program is possible up to the end of the 1st year. Depending on the choice of UEs in semesters 7 or 8, reorientations to the Georisks or Geophysics programs are also possible.

Useful info

Contacts

Program director

Laurent Truche

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Program administration

Application

phitem.candidature.etudiant@univ-grenoble-alpes.fr

Program administration

Registrar's Office of the Master in Earth, planetary and environmental sciences

phitem.master.stpe@univ-grenoble-alpes.fr

Partner laboratories

Institute of Earth Sciences - ISTerre

https://www.isterre.fr

Course location(s) - City

Grenoble

Campus

Grenoble - University campus

Program

Solid earth portal 1st year

Semester 7

	Nature	CM	TD	TP	Crédits
UE Numerical analysis project	Teaching Unit (UE)		12h		3 credits
UE Physics and chemistry of the earth	Teaching Unit (UE)				6 credits
UE Geomechanics	Teaching Unit (UE)				3 credits
UE Dynamics of the Lithosphere	Teaching Unit (UE)				6 credits
UE Petrology	Teaching Unit (UE)				6 credits
UE Data and models in earth sciences	Teaching Unit (UE)				6 credits
UE Geophysical prospecting	Teaching Unit (UE)			15h	6 credits
UE Geochemical and mineralogical exploration methods	Teaching Unit (UE)				6 credits
UE Field workshop tectonics-metamorphism	Teaching Unit (UE)				3 credits
UE Field course Petrology	Teaching Unit (UE)				3 credits
UE Intro workshop - professional project	Teaching Unit (UE)		6h		3 credits
UE Geochemistry of pollution	Teaching Unit (UE)			6h	3 credits

Semester 8

	Nature	CM	TD	TP	Crédits
UE Scientific and professional communication	Teaching Unit (UE)				3 credits

UE Remote sensing and GIS project	Teaching Unit (UE)	24h		24h	6 credits
UE Mineral resources	Teaching Unit (UE)				3 credits
UE Exploration geophysics	Teaching Unit (UE)				6 credits
UE Basin analysis	Teaching Unit (UE)				6 credits
UE Multidisciplinary field workshop	Teaching Unit (UE)				6 credits
UE Subsurface modelling	Teaching Unit (UE)			30h	3 credits
UE Sedimentary field workshop	Teaching Unit (UE)				3 credits
UE Marine geophysical workshop	Teaching Unit (UE)				3 credits
UE Induced seismicity	Teaching Unit (UE)				3 credits

Master 2nd year

Semester 9

	Nature	CM	TD	TP	Crédits
UE Field geology workshop	Teaching Unit (UE)				3 credits
UE Geomechanics in reservoir and basin systems	Teaching Unit (UE)				6 credits
UE Dynamics of the lithosphere	Teaching Unit (UE)				6 credits
UE Petrology	Teaching Unit (UE)				6 credits
UE Geochemical and mineralogical exploration methods	Teaching Unit (UE)				6 credits
UE Drilling and borehole geophysics	Teaching Unit (UE)				3 credits
UE Tectonic field workshop-metamorphism	Teaching Unit (UE)				3 credits

UE Petrology field workshop	Teaching Unit (UE)				3 credits
UE Tutored project in mineral resources	Teaching Unit (UE)		6h		3 credits
UE Advanced mineral ressources	Teaching Unit (UE)				3 credits
UE Energy markets and geopolitics of resources	Teaching Unit (UE)				3 credits
UE Transition énergétique	Teaching Unit (UE)				3 credits

Semestre 10

	Nature	CM	TD	TP	Crédits
UE Research internship	CHOICE				
UE Company internship	CHOICE				