

#### SCIENCES, TECHNOLOGIES AND HEALTH

## Georessources 1st and 2nd year

Master in Earth, planetary and environmental sciences

 $\bigcirc$ 

FCTS **Baccalaureate** 120 credits



Duration 2 years

Ш

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



## Presentation

Target level

+5

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.

This Master Course gives you the opportunity to apply to the UGA Graduate School and one of its 15 thematic programmes that add an interdisciplinary component to your studies. Terra is the thematic programme closest to this Course. The objective of the thematic programmes is to offer students an interdisciplinary study programme combining

academic teaching and training through laboratory research. The programme brings together students from different majors, master's courses or engineering programmes and works together in specific courses. Participation in the @UGA Graduate School is for two years (M1 and M2) and may open the possibility of obtaining an academic scholarship for two years for the best international students (non-French baccalaureate holders).

More information on the 🖸 Graduate School website

International education Internationally-oriented programmes

### International dimension

Study abroad as an exchange student

As part of this track, you have the opportunity to study for a semester or a year at a UGA partner University abroad.

The International Relations Officers of your faculty will be able to provide you with more information.

More information on : C https://international.univ-grenoblealpes.fr/partir-a-l-international/partir-etudier-a-l-etrangerdans-le-cadre-d-un-programme-d-echanges





# 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

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 **Z** 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 2023-2024 : 243 € + 100€ CVEC

### 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 Iaurent.truche@univ-grenoble-alpes.fr

#### 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

Continuing education manager Laura DI RUZZA St-phitem@univ-grenoble-alpes.fr

### **Partner laboratories**

Institute of Earth Sciences - ISTerre https://www.isterre.fr

### Course location(s) - City

Grenoble

### Campus

F Grenoble - University campus





# Program

## Specifics of the program

Program under construction - awaiting CFVU vote

#### Master 1st year

#### Semester 7

	Nature	СМ	TD	TP	Crédits
UE Novel analysis methods in geochemistry & mineralogy	Teaching Unit (UE)		21h		6 credits
UE Physics and Chemistry of the Earth	Teaching Unit (UE)		6h		6 credits
UE Introductory Field Course - Professional project	Teaching Unit (UE)				3 credits
UE Géochimie des contaminants : I) interactions métaux/minéraux/matière organique dans les réservoirs terrestres	Teaching Unit (UE)		6h	18h	6 credits
UE Petrology field course	Teaching Unit (UE)				3 credits
UE Geomechanics	Teaching Unit (UE)				3 credits
UE Geophysical Prospecting	Teaching Unit (UE)				3 credits
UE Géochimie des contaminants II) modélisation Phreeqc	Teaching Unit (UE)		18h		3 credits
UE Lithosphere dynamics (2024-2025)	Teaching Unit (UE)		14h		6 credits
UE Croissance économique et limites planétaires: climat, biodiversité	Teaching Unit (UE)		6h		3 credits
UE Petrology	Teaching Unit (UE)				6 credits
Semester 8					





UE Basin analysis	Teaching Unit (UE)				6 credits
UE Mineral resources	Teaching Unit (UE)				3 credits
UE Exploration geophysics	Teaching Unit (UE)		3h	30h	6 credits
UE Subsurface modelling	Teaching Unit (UE)			24h	3 credits
UE Multidisciplinary field course	Teaching Unit (UE)				6 credits
UE Sedimentology field course	Teaching Unit (UE)				3 credits
UE Stratégie argumentative	Teaching Unit (UE)		12h		3 credits
UE Marine Geophysics	Teaching Unit (UE)				3 credits
UE Remote sensing and GIS project	Teaching Unit (UE)	36h		24h	6 credits

### Master 2nd year

### Semester 9

	Nature	CM	TD	TP	Crédits
UE Mineral Resources and Sustainable Development	Teaching Unit (UE)				3 credits
UE Field trip : Exploration and Mining Geology	Teaching Unit (UE)				3 credits
UE GéoReservoirs: caractérisation, évaluation, valorisation	Teaching Unit (UE)		16h		6 credits
UE Drilling and borehole geophysics	Teaching Unit (UE)			9h	3 credits
UE Tectonics-Metamorphism field course	Teaching Unit (UE)				3 credits
UE Lithosphere dynamics (2024-2025)	Teaching Unit (UE)		14h		6 credits
UE Near surface geophysics	Teaching Unit (UE)		6h	21h	6 credits

UGA Université Grenoble Alpes				
UE Environmental-politics	Teach Unit (l	ing 6h JE)		3 credits
UE Active Faults	Teach Unit (l	ing 9h JE)	9h	6 credits
Semestre 10				

	Nature	СМ	TD	TP	Crédits
UE short Internship	Teaching				6 credits
	Unit (UE)				
UE long Internship	Teaching				24 credits
	Unit (UE)				