

Master in Earth, planetary and environmental sciences

Georesources 1st and 2nd year

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.

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](#)

Registration and scholarships

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 \(VAPP\)](#)

skin.odf-uga:SKIN_ODF_CONTENT_PROGRAM_CANDIDATURE_LABEL

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](#)

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.

Target group

- 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

Expenses

Tuition fees 2023-2024 : 243 € + 100€ CVEC

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.

Practicals informations :

- > Component : UFR PhITEM (physique, ingénierie, terre, environnement, mécanique)
- > level : Baccalaureate +5
- > Duration : 2 years
- > Course type : Initial and Continuing Education
- > Location(s) : Grenoble - University campus

Contacts

Program director

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Program administration

Application
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Registrar's Office of the Master in Earth, planetary and environmental sciences
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Continuing education manager

DI RUZZA Laura

Program

Program under construction - awaiting CFVU vote

Master 1st year

Semester 7

UE Novel analysis methods in geochemistry & mineralogy	6 ECTS
UE Physics and Chemistry of the Earth	6 ECTS
3 option(s) to choose from 3	
UE Introductory Field Course - Professional project	3 ECTS
UE Géochimie des contaminants : I) interactions métaux/minéraux/ matière organique dans les réservoirs terrestres	6 ECTS
UE Petrology field course	3 ECTS
UE Geomechanics	3 ECTS
UE Geophysical Prospecting	3 ECTS
UE Géochimie des contaminants II) modélisation Phreeqc	3 ECTS
UE Lithosphere dynamics (2024-2025)	6 ECTS
UE Croissance économique et limites planétaires: climat, biodiversité	3 ECTS
UE Petrology	6 ECTS

Semester 8

UE Basin analysis	6 ECTS
UE Mineral resources	3 ECTS
4 option(s) to choose from 6	
UE Exploration geophysics	6 ECTS
UE Subsurface modelling	3 ECTS
UE Multidisciplinary field course	6 ECTS
UE Sedimentology field course	3 ECTS
UE Stratégie argumentative	3 ECTS
UE Marine Geophysics	3 ECTS
UE Remote sensing and GIS project	6 ECTS

Master 2nd year

Semester 9

UE Mineral Resources and Sustainable Development	3 ECTS
UE Field trip : Exploration and Mining Geology	3 ECTS
UE GéoReservoirs: caractérisation, évaluation, valorisation	6 ECTS
3 option(s) to choose from 4	
UE Drilling and borehole geophysics	3 ECTS
UE Tectonics-Metamorphism field course	3 ECTS
UE Lithosphere dynamics (2024-2025)	6 ECTS
UE Near surface geophysics	6 ECTS
UE Environmental-politics	3 ECTS
UE Active Faults	6 ECTS

Semestre 10

UE short Internship	6 ECTS
UE long Internship	24 ECTS