

Contacts

Location

Universidad de Zaragoza

Facultad de Ciencias
Departamento de Ciencias de la Tierra
<http://cienciatierra.unizar.es/>
<https://cienciatierra.unizar.es/docencia/master-en-geologia-aplicada>
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Preregistration

Steps (fases) and Dates

Step 1 (Fase 1)

- Submission of applications: 3 - 24 of March 2025
- Publication of provisional list: 1st of April 2025
- Correction period: 2 - 4 of April 2025
- Publication of final list: 10th of April 2025
- Payment for place booking: 11 - 28 April 2025

Step 2 (Fase 2)

- Submission of applications: 12 - 30 June 2025
- Publication of provisional list: 8th of July 2025
- Correction period: 9 - 11 July 2025
- Publication of final list: 18th of July 2025

Step 3 (Fase 3)

- Submission of applications: 25 August - 5 Sept. 2025
- Publication of provisional list: 11th of September 2025
- Correction period: 12 - 15 September 2025
- Publication of final list: 19th of September 2025

Information for grants

<https://academico.unizar.es/becas/seccion-de-becas-de-la-universidad-de-zaragoza>

Academic requirements

- Applicants must hold a degree in Science (Geology, Chemistry, Environmental, Biology) or Engineering (Civil, Chemical, Geological, Forestry and Natural Environment, Agricultural, Road, Mining).
- Those with a foreign higher education degree (outside of the European Higher Education Area) need to apply for "Access Authorization" (Autorización de Acceso), without the need for its homologation or equivalence. This authorization can be requested at any time of the year but recommended for certain dates (see: <https://academico.unizar.es/acceso-master/acceso-con-estudios-extranjeros-no-homologados-obtenidos-fuera-del-espacio>).



Program facts

- Full Academic year (from end of September to July).
- Credits: 60 ECTS.
- Course is taught in Spanish.

Registration

Online and with a UNIZAR identification number (NIA): <https://academico.unizar.es/grado-y-master/matricula/matricula-home>

FIRST REGISTRATION PERIOD: 22, 23 and 24 July 2025

<https://academico.unizar.es/matricula-master/matricula>

SECOND REGISTRATION PERIOD: 22, 23 and 24 September 2025

<https://academico.unizar.es/matricula-master/matricula>

Fees and charges

Cost of registration: <https://academico.unizar.es/grado-y-master/matricula/precio-de-la-matricula-de-master-universitario>

Master's Degree in Geology applied to Engineering and Environmental Sciences

Máster en Geología Aplicada a la Ingeniería y el Medio Ambiente

Facultad de Ciencias Universidad Zaragoza

Departamento de Ciencias de la Tierra Universidad Zaragoza

Instituto Universitario de Investigación en Ciencias Ambientales de Aragón Universidad Zaragoza

COMPROMETIDOS Universidad de Zaragoza



Universidad
Zaragoza

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Overview

The Master's degree (taught in Spanish but with some English-friendly activities) is designed for students who already have a Degree in Geology, Engineering (Civil, Chemical, Geological, Forestry and Natural Environment, Agricultural, Road, Mining) Environmental Sciences, Soil Sciences, Chemistry, Biology.

The program offers about 400 hours of courses including field trips and laboratory work. It is therefore an appropriate course for students who wish to strengthen their skills in the field of geosciences applied to engineering, limiting contamination or natural habitat restoration.

More specifically, students will refine their skills in groundwater reservoir characterization, rock mass analysis, and geospatial data interpretation.

This Master's program benefits from a dynamic and research-intensive geoscience environment. The interdisciplinary curriculum is delivered by faculty from different departments (@unizar and @ipe-csic). Most faculty members belong to the Research Institute IUCA (Instituto Universitario de Investigación en Ciencias Ambientales de Aragón). The Master's program is housed within the Faculty of Sciences and further enriched by its proximity to diverse natural and geological landscapes.

Student learning outcomes

At the end of the Master's Program, depending on the options chosen, the student will specialize in:

- **Applied Geology to the Environment**

If students focus on the acquisition and processing of geological and geochemical data in order to better control contamination in water, soils and air and manage the environmental challenges of mining.

- **Applied Geology to Engineering**

If students follow an Engineering Science oriented course to acquire and process geophysical data in order to solve various geotechnical problems, understand seismological risks and characterize the subsurface for better sustainable solutions through low geothermal enthalpy.

Or choose your own trajectory

If students follow a broad interest in the applications of geological knowledge to environmental, ecological or engineering management or an interest in research.



Opportunities

Sectors

- Environmental companies
- Geotechnical companies
- Geosciences companies
- Geothermal companies
- Public Administration

Fields

- Technical /Administration position
- Research

Positions

- Achieve a Level 3 in the European Qualifications Framework (EQF)
- Enter a PhD program

Program

Mandatory

- Introduction to applied Geology. Fieldwork
- Geostatistics, remote sensing, GIS
- Geoanalytical techniques
- Applied geophysics
- Surficial and groundwater hydrology

Optional (student will choose 4)

- *Fundamentals of contamination in water and soils
- *Mining impact and restoration
- Minerals, atmospheric contamination and health
- Remediation of water and soils
- *Advanced rock mechanics
- Seismotectonics and seismic risk
- Slope stability
- Shallow geothermal
- Environmental management in Applied geology

*Mandatory in case of specialization