

Mineral Exploration (I002921)

Course size *(nominal values; actual values may depend on programme)*

Credits 10.0 **Study time** 300 h

Course offerings in academic year 2023-2024

A (semester 2) English Gent

Lecturers in academic year 2023-2024

Jeanneret, Pauline

UPPSAL01 lecturer-in-charge

Offered in the following programmes in 2023-2024

crdts **offering**

[International Master of Science in Sustainable and Innovative Natural Resource Management](#)

10 A

Teaching languages

English

Keywords

Position of the course

Contents

Introduction to the characteristics, distribution and genesis of mineral resources. Review of the most common ore types and the ore-forming processes (magmatic, hydrothermal and sedimentary). Exploration methods (geological, geophysical and geochemical). Case studies of existing exploration prospects. Aspects of economic geology, environmental impacts, resource use and importance for society. Equal opportunities with respect to the Discrimination Act.

Initial competences

90 credits in science/engineering (physics, chemistry, biology, mathematics, earth science, computer science, material science), including 15 credits in mathematics or physics and 10 credits in chemistry. Proficiency

Final competences

- 1 On completion of the course the student shall be able to:
 - Evaluate the occurrence of mineral resources in Earth's crust
- 2 - Assess the ore-forming processes for different types of ore deposits based on the local geology and from a plate-tectonic perspective
- 3 - Critically evaluate important aspects of ore-forming processes such as source, transport and deposition of metals
- 4 - Evaluate geological, geophysical and geochemical exploration methods, and how they are used for different ore types and at different stages of an exploration campaign
- 5 - Assess factors controlling the economical aspect of mineral resources and the importance of resources for society
- 6 - Critically assess the environmental impact of mining activities and initiatives to make exploration and mining more sustainable

Conditions for credit contract

This course unit cannot be taken via a credit contract

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Lecture, seminar

Learning materials and price

References

Course content-related study coaching

Evaluation methods

end-of-term and continuous assessment

Examination methods in case of periodic evaluation during the first examination period

Assignment, skills test, written assessment, presentation

Examination methods in case of periodic evaluation during the second examination period

Assignment, skills test, written assessment, presentation

Examination methods in case of permanent evaluation

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible in modified form

Extra information on the examination methods

Written examination (5 credits), practical examination and project work (2 credits), seminars
presentation (3 credits)

If there are special reasons for doing so, an examiner may make an exception from the method
of assessment indicated and allow a student to be assessed by another method.

Calculation of the examination mark