

Critical Metals and Minerals (I002197)

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

Credits 5.0 **Study time 150 h**

Course offerings in academic year 2023-2024

A (semester 1) English Gent

Lecturers in academic year 2023-2024

Jonsson, Erik 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	5	A

Teaching languages

English

Keywords

Position of the course

Contents

This course provides an overview of the principles of classification and assessment of critical metals and minerals and their application globally, and specifically within the EU. The "rare metal" concept will feature. The supply of critical metals and minerals will be discussed. The mineralogy of critical metals, the metallogenetic context of present and near-future deposit types for critical metals and minerals, as well as deposit classification and distribution, will be covered. Problems surrounding substitution and recycling potential will be discussed.

Individual student projects are focused on certain types of critical metal and mineral deposits, their character and origin, and include evaluating their present and future potential.

Initial competences

Entry requirements – *same as masters programme*

Final competences

- 1 able to: Describe the background of the concept of critical metals and minerals, and their selection as such within an EU perspective.
- 2 able to: Describe the most important critical metal minerals, key metallogenetic processes responsible for the formation of deposits of critical metals and minerals, and their geological context.
- 3 able to: Evaluate geological constraints on global critical metal and mineral supply responses.
- 4 able to: Explain the demand and applications for these metals, and motivate their exploration and mining in a European context.

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

Seminar, Lecture, Practical

Extra information on the teaching methods

Lectures, individual project work, seminars, practicals, literature studies.

Learning materials and price**References****Course content-related study coaching****Assessment moments****Examination methods in case of periodic assessment during the first examination period**

Oral assessment, Participation

Examination methods in case of periodic assessment during the second examination period**Examination methods in case of permanent assessment****Possibilities of retake in case of permanent assessment**

examination during the second examination period is possible

Extra information on the examination methods

The course is graded based on the written and oral presentations of an individual project, active participation/feedback during seminars and a home-exam.

Calculation of the examination mark