

SYLLABUS

Mining and Mineral Engineering 2 7.5 credits Q0029B

Bergteknik 2

Course syllabus admitted: Spring 2021 Sp 3 - Present

**DECISION DATE
2020-11-06**

Mining and Mineral Engineering 2 7.5 credits Q0029B

Bergteknik 2

First cycle, Q0029B

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Berg- och mineralteknik	Mining and Mineral Technology

Entry requirements

In order to meet the general entry requirements for first cycle studies you must have successfully completed upper secondary education and documented skills in English language and Mining and Mineral Engineering I, 7.5 credits

Selection

The selection is based on 1-165 credits.

Examiner

Andreas Eitzenberger

Course Aim

The course gives basic knowledge of economical estimation and presentation of mineral projects.

After completed course the student should be able to:

- Know different mining technological/economical projecting methods
- Under supervision cooperate in project/projecting-group with part of or total solution of ore-base-calculations.
- Understand the importance of separate detail-operations for the totality
- Know and be able to contribute to development work and projecting
- Estimate the value of different solutions regarding choice of methods, machines etc

Contents

The course is subdivided into the following sections:

Result of analysis from diamond drilling: Treatment of input for mineralizing.

Selection of mining-method: Selection of mining-method and planning of the mining-operations. Influence of losses of ore , waste rock interference and production volumes.

Planning of the mining operations: Mining of ore and minerals in open-cast mine and underground (methods with open rooms, mining with blockage and crash-down). Establish mining costs.

Calculation of costs: Costs for concentration and transport to melting plants, costs for extraction of metals at melting-plants. Market analyses for products made.

Economical calculations: Methods for economical calculations such as limit-value calculation, cut-off calculation. Cash-flow and present value, sensitivity- and risk-analyses.

Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

Lectures, exercises and project tasks.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.

Written examination 4 credits and assignments 3,5 credits. Final grade after collected assessment by the examiner.

Literature. Valid from Autumn 2013 Sp 2

- Wellmer, F.-W., Dalheimer, M. & Wagner, M. (2008) Economic Evaluations in Exploration. 2nd Ed. Berlin: Springer. ISBN 978-3-540-73557-1.
- Forsman Bo. (2001) Malmbrytningsmetoder. (114 s). Kompendium. Bergsskolan i Filipstad.

Course offered by

Department of Civil, Environmental and Natural Resources Engineering

Modules

Code	Description	Grade scale	Cr	Status	From period	Title
0001	Written exam	G U 3 4 5	4	Mandatory	A12	
0003	Assignment report	U G#	3.5	Mandatory	A17	

Last revised

by Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2020-11-06

Syllabus established

by Lars Bernspång 2012-04-03