

SYLLABUS

Rock Engineering for Technicians 7.5 credits Q0006B

Bergteknik för tekniker

Course syllabus admitted: Autumn 2017 Sp 1 - Autumn 2019 Sp 2

**DECISION DATE
2017-06-16**

Rock Engineering for Technicians 7.5 credits Q0006B

Bergteknik för tekniker

First cycle, Q0006B

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

Selection

The selection is based on final school grades or Swedish Scholastic Aptitude Test.

Examiner

Erling Nordlund

Course Aim

On completion of the course the student should be able to:

- Explain how drilling and blasting of rock are carried out
- Explain the choice of machinery and equipment for drilling in rock
- Use different rock engineering design methods
- Define clearly the influence of each unit operation for the entire process
- Identify different solutions and modify those solutions as regards the choice of machinery and mining methods.

Contents

The course provides basic knowledge about rock construction techniques and methods that are used in order to mine out bodies of ore. The most important part of the course are rock engineering unit operations (drilling, blasting, haulage, transport, and reinforcement). Special emphasis in this part is attached to drilling and blasting through field trips and laboratory work. The course also covers the general use of caverns and tunnels, project design in rock engineering, mining methods and auxiliary rock engineering operations such as ventilation and control of ground water.

Realization

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

Lectures, laboratory work, study visits and a project.

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 exam (4 points) as well as a project report, laboratory reports and reports from study visits; (3.5 points). Grades are given after assessment of both the written examination and the laboratory/project.

Remarks

The course corresponds to BE1007.

Literature. Valid from Autumn 2016 Sp 1

- Forsman Bo. (2001) Bergbyggnadsteknik. (118 s). Anmärkning/Note: Kompendium
- Trafikverket (2014) Trafikverkets handbok för ovanjordssprängning. Rapport 2014:044. ISBN: 978-91-7467-566-5. Tillgänglig i elektronisk form på trafikverket.se
- Lindblom, Ulf. (2010) Bergbyggnad. 1 uppl. Stockholm : Liber. (240 s). ISBN 978-91-47-09409-7

Course offered by

Department of Civil, Environmental and Natural Resources Engineering

Items/credits

Number	Type	Credits	Grade
0001	Written exam	4	G U 3 4 5
0003	Project assignment, study visit, laboratory work	3.5	U G#

Last revised

by Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2017-06-16

Syllabus established

by Lars Bernspång 2012-04-03