SYLLABUS

Mineral Processing Technology I 7.5 credits Q0024B

Mineralteknik I

Course syllabus admitted: Spring 2019 Sp 3 - Spring 2020 Sp 4

DECISION DATE
2018-11-20

Luleå University of Technology 971 87 Luleå, Sweden
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LULEÅ TEKNISKA UNIVERSITET

Mineral Processing Technology I 7.5 credits Q0024B

Mineralteknik I

First cycle, Q0024B

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 +
Swedish upper secondary school courses Physics 2, Chemistry 1, Mathematics 3c (specifik entry A8).
Or:
Swedish upper secondary school courses Physics B, Chemistry A, Mathematics D (specifik entry 8)

Selection

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

Examiner

Bertil Pålsson

Course Aim

The course aims that students shall acquire basic knowledge of mechanical process technology, including unit operations and experimental methods. The student after completing the course, should be able to:

- carry out particle distribution measurement and present the results
- calculate material flow
- identify different methods of comminution and fragmentation as well as performing calculations based on known theoretical models
- describe different methods for sizing of the particles as constituents of masses
- describe methods for sorting of materials with respect to the physical and chemical properties
- describe methods for media separation

Contents

- experimental methods for the analysis of particle size and specific surface
- calculations of mass and substance distributions from fraction analysis
- sampling of particle-based materials
- crushing, sieving,
- milling and classification
- wet and dry separation methods such as gravity, flotation as well as magnetic and electrical separation

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.
Lectures, calculation assignments and laboratory assignments.

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 5 credits
Written assignments 2.5 credits

Literature. Valid from Autumn 2016 Sp 1

Wills B.A. & Finch J.A. (2016). Wills' Mineral Processing Technology. 8 ed. Amsterdam: Butterworth-Heinemann. ISBN 978-0-08-097053-0.

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	5	Mandatory	A12	
0002	Assignment reports	U G#	2.5	Mandatory	A12	

Last revised

by Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2018-11-20

Syllabus established

by Lars Bernspång 2012-04-03