

**SYLLABUS**

# **Basic Metallurgi 7.5 credits**

## **Q0015B**

**Metallurgi grundkurs**

**Course syllabus admitted: Spring 2019 Sp 3 - Autumn 2019 Sp 2**

**DECISION DATE**  
**2018-11-07**

# Basic Metallurgi 7.5 credits Q0015B

## Metallurgi grundkurs

### First cycle, Q0015B

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	G U 3 4 5	Processmetallurgi	Chemical Engineering

## 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 Q0045B Metallurgical and Physical Chemistry 7,5 credits or corresponding course

## Selection

The selection is based on 1-165 credits.

## Examiner

Phillip Tretten

## Course Aim

After having concluded the course, the student should be able to:

- understand the meaning of and apply fundamental concepts and principles of metallurgy;
- understand the different metal production systems
- search for and collect information from the libraries and the internet;
- understand the important terminology in English.

## Contents

Principles of pyrometallurgy  
Principles of hydrometallurgy  
Principles of electrometallurgy  
Reactions in the blast furnace  
Direct reduction processes  
Steelmaking. Modern oxygen steelmaking processes, Electric arc furnace, Induction furnace  
Ladle furnace and refining  
Aluminium production  
Copper production  
Zinc production  
Silicon production  
Energy, environment and recycling

## Realization

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

Lectures and problems solving sessions, as well as own individual work with problem solving. To further assist the learning, assignments are handed out which are solved individually by the student.

## 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 (5/4/3/not approved and ECTS A-E/F) 5 credits  
Home assignments (approved/not approved) 2,5 credits  
Foundry Visit (approved/not approved) 1 credits

## Literature. Valid from Spring 2019 Sp 3

## 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	4.5	Mandatory	A12	
0002	Assignment reports	U G#	2	Mandatory	A12	
0003	Study visit	U G#	1	Mandatory	A12	

## Last revised

by Assistant Director of Undergraduate Studies Eva Gunneriusson, Department of Civil, Environmental and Natural Resources Engineering 2018-11-07

## Syllabus established

by Lars Bernspång 2012-04-03