

**SYLLABUS**

# **Mathematics B 4.5 pre- education credits BX002M**

**Matematik B**

**Course syllabus admitted: Autumn 2012 Sp 1 - Autumn 2013 Sp 2**

DECISION DATE  
**2012-04-03**

# Mathematics B 4.5 pre-education credits BX002M

## Matematik B

### Pre-university level, BX002M

Education level	Grade scale	Subject	Subject group (SCB)
Pre-university level	G U 3 4 5	Matematik	Mathematics

## 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

## Examiner

Lars Bergström

## Course Aim

To give basic knowledge in the mathematics required to study natural science/technology at university level.

After completed course the student should be able to

- Explain, demonstrate and apply important theorems of classical geometry solving problems.
- Calculate probability at simple random tests and random tests in several steps and evaluate probabilities by the study of relative frequencies.
- Utilize different types of averages for statistical material and explain their differences and know and interpret some statistical dispersion.
- Interpret, simplify and transform expressions of the second degree and solve equations of the second degree and apply this knowledge at solution of problems.
- Work with the equation of the straight line in different forms and solve linear inequalities and systems of equations with graphic and algebraic methods.
- Explain the characteristics of a function and set up, interpret and utilize some non-linear functions as models of real courses of events and in this connection work with and without computer and graphing aids.

## Contents

Statistics and probability theory

Algebra, equations and functions

Linear and non-linear models

Geometry

## Realization

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

Lessons

## 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 test. Assignments

## Remarks

The course can not be a part of an exam at University of Dalarna.

The course corresponds to MA0004.

## Literature. Valid from Autumn 2012 Sp 1

Björk, Lars-Eric, Brodin, Hans, Munther, Roland. (2001) Matematik 3000 : matematik tretusen. Kurs B. Stockholm : Natur och kultur. (251 s). ISBN 91-27-51026-3

Anmärkning/Note: del av: Björk, Lars-Eric, 1933-, Matematik 3000 : matematik tretusen : komvux . 1. uppl. . Stockholm : Natur och kultur, 2000-, Även med tryckår: 2. tr., 2001 ; 3. tr., 2002

## Course offered by

Department of Engineering Sciences and Mathematics

## Items/credits

No items/credits available

# Syllabus established

by Dept TVM Mats Näsström 2012-04-03