

SYLLABUS

Mathematics C 10.5 pre- education credits BX001M

Matematik C

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

DECISION DATE
2012-04-03

Mathematics C 10.5 pre-education credits BX001M

Matematik C

Pre-university level, BX001M

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 of the mathematics required to study natural science/technology at university level.

After completed course the student should be able to:

- Interpret and utilize logarithms and powers with real exponents and be able to use them at solution of problems
- Set up, simplify and utilize polynomial expressions and describe and utilize properties of some polynomial functions and power functions.
- Set up, simplify and utilize rational terms and solve polynomial equations of higher degree by factorizing.
- Utilize mathematical models of different kinds, including those constituted by the total of a geometric progression.
- Utilize computers and graphic calculators as technical aids at the study of mathematical models in different applications.
- Interpret, illustrate and utilize the terms quote of change and derivative and utilize these in order to describe properties of a function and its graph
- Explain derivation rules for some basic power functions, sums of functions and simple exponential functions and in connection with this to describe why and how the number e is applied.
- Draw conclusions on the derivative of a function and evaluate it numerically when the function is represented by a graph.
- utilize the connection between the graph of a function and its derivative in different applications with and without graphing aids.

Contents

Algebra, equations and functions

Rates of change, derivatives and applications of same.

Progressions and sums

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

Remarks

The course corresponds to MA0005.

Transition terms

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

Literature. Valid from Autumn 2012 Sp 1

Björk, Lars-Eric, Brolin, Hans. (2000) Matematik 3000 : matematik tretusen. Kurs C och D, Lärobok. Naturvetenskap och teknik. 1 uppl. Stockholm : Natur och kultur. (348 s). ISBN 91-27-51002-6
Anmärkning/Note: Även med tryckår: 2. tr., 2001 ; 3. tr., 2001 ; 4. [tr.], 2001 ; 5. tr., 2002 ; 6. tr., 2003

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