SYLLABUS

Mathematics - Undergraduate Level 7.5 credits B0003M

Matematik, grundläggande analys

Course syllabus admitted: Autumn 2012 Sp 1 - Spring 2017 Sp 4

DECISION DATE
2012-04-03

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LULEÅ TEKNISKA UNIVERSITET

Mathematics - Undergraduate Level 7.5 credits B0003M

Matematik, grundläggande analys

First cycle, B0003M

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	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 +
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

Lars Bergström

Course Aim

The aim of the course is to give the students basic knowledge of selected parts of algebra and the analysis commonly applied to technology and natural science.

After completed studies the student should be able to:

- simplify and work with elementary functions such as power functions, exponential functions and logarithmic functions.
- solve equations containing expressions of power as well as expressions of exponentials and logarithms.
- work with complex numbers.
- solve linear systems of equations.
- work with matrices.
- work with vectors in three dimensions.
- describe lines and planes in space in different ways and calculate distances and angles in space.

A comprehensive outcome is finally to create prerequisites for further university studies of mathematics and applied supplementary courses

Contents

Numeral systems, inequalities, absolute values, elementary functions, equations, complex numbers, vector-geometry, linear systems of equations, matrices and determinants, linear reproductions.

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 exercises

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 MAA039 and MA1010.

Literature. Valid from Autumn 2012 Sp 1

Rodhe, Staffan, Sollervall, Håkan. (2003) Matematik för ingenjörer. 5 uppl. Lund : Studentlitteratur. (560 s). ISBN 91-89104-01-3

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