

SYLLABUS

Mathematics and Music 7.5 credits M0027M

Matematik och musik

Course syllabus admitted: Autumn 2009 Sp 1 - Spring 2011 Sp 4

DECISION

The syllabus was approved by the department of mathematics and is valid from H07 (Autumn 2007).

Mathematics and Music 7.5 credits M0027M

Matematik och musik

First cycle, M0027M

Education level	Grade scale	Subject	Subject group (SCB)
First cycle	U G VG	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 and Basic course in mathematics course A from the Swedish high school/public upper school or consent of the examiner.

Approved knowledge in music theory equivalent to Musicklära from either K0010G Musikteori A (from Grundkurs musik A) or C0007G Musikalisk grundkurs, or consent of the examiner.

Selection

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

Examiner

Lennart Karlberg

Course Aim

When the course is finished the student should

- have a knowledge in basic mathematical topics and structures with respect to musical applications.

Contents

The course consists mainly of following parts:

- Basic algebra.
- Elementary functions: Rational functions, power functions, exponential functions, and logarithmic functions.
- Number sequences.
- Musical scales.
- Number sequences and The Golden Section in music.

Realization

The course is held at the School of Music in Piteå.

Lectures/tutorials. During the tutorials the students work with problem solving under supervision. Study visits may occur.

Examination

In order to pass the course, the student needs to

- produce a minimum of correct solutions in a written exam.

The grade level is determined by the result of the exam.

Remarks

Course level: Basic

Overlap

The course M0027M is equal to MAM279

Literature. Valid from Autumn 2008 Sp 1

Wallin, H, m.fl, Matematik inför högskolan - Repetition, Liber AB, 1998, ISBN 91-47-01385-0.
Lundberg S, Kompendium i Matematik och musik, LTU 2008.

Course offered by

Department of Engineering Sciences and Mathematics

Items/credits

Number	Type	Credits	Grade
0001	Written exam	7.5	U G VG

Last revised

The syllabus was approved by the department of mathematics and is valid from H07 (Autumn 2007).

Syllabus established

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