



LUND
UNIVERSITY

Faculty of Science

MATB13, Mathematics: Discrete Mathematics, 7.5 credits

Matematik: Diskret matematik, 7,5 högskolepoäng

First Cycle / Grundnivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2007-11-19 to be valid from 2008-01-01, spring semester 2008.

General Information

The course is an elective course for first-cycle studies for a Bachelor of Science.

Language of instruction: Swedish and English

Main field of studies

Mathematics

Depth of study relative to the degree requirements

G1F, First cycle, has less than 60 credits in first-cycle course/s as entry requirements

Learning outcomes

The aim of the course is that the student on completion of the course should:

- have developed the ability to communicate mathematics in speech and writing
- be familiar with the basic theory for and the applications of discrete mathematics,
- have acquired basic knowledge for continued studies in mathematics and other scientific subjects.

Course content

Combinatorics, generating functions, recurrence relations and difference equations. Rings and fields with application to coding theory.

Course design

The teaching consists of lectures and problem solving classes. An essential feature of the exercise sessions is practice in problem-solving. Compulsory written assignments may occur during the course.

Assessment

The examination consists of a written exam followed by an oral exam. The oral exam may only be taken by those students who pass on the written exam. Students who fail the regular exam are offered a re-examination shortly afterwards.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass, Pass with distinction.

Entry requirements

For admission to the course, general entry requirements and knowledge equivalent to the courses MATA14 Mathematics: Analysis 1, 15 credits, and MATA15 Mathematics: Algebra 1, 15 credits (or MATA11 Mathematics 1 alfa, 15 credits, and MATA12 Mathematics 1 beta, 15 credits) are required.

Further information

The course may not be included in a higher education qualification together with MAT243 Discrete Mathematics, 5 p.

Subcourses in MATB13, Mathematics: Discrete Mathematics

Applies from H07

0701 Discrete Mathematics, 7,5 hp
Grading scale: Fail, Pass, Pass with distinction