Mathematics

Programme course

6 credits

Grunder i matematik och logik

TDP015

Valid from: 2017 Spring semester

Determined by

Board of Studies for Computer Science
and Media Technology

Date determined

2017-01-25

Main field of study

Mathematics, Programming

Course level

First cycle

Advancement level

G1X

Course offered for

- Programming, Bachelor's Programme

Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Intended learning outcomes

The course is designed to give an introduction to different areas of mathematics, and serves as a background to applications in further studies of computer science, especially programming and software development. After the course the student will be able to:

- use basic concepts of set theory and logic
- perform induction proofs and relate these to recursion
- perform simple combinatorial and probabilistic reasoning
- use basic concepts of number theory
- discuss basic concepts of graph theory
- discuss the principles of numerical methods

Course content

Introduction to set theory and logic, induction, graphs, combinatorics and probability, number theory, numerical methods,

Teaching and working methods

The course consits of lectures and lessons.

Examination

UPG1	Assignments	3 credits	U, G
TEN1	Written examination	3 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för datavetenskap

Director of Studies or equivalent

Ahmed Rezine

Examiner

Marco Kuhlmann

Course website and other links

http://www.ida.liu.se/~TDP015/

Education components

Preliminary scheduled hours: 36 h
Recommended self-study hours: 124 h

Course literature

Fastställs senare

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.