Linnæus University

Course syllabus

Faculty of Technology
Department of Mathematics

1MA441 Grundläggande matematik för dataloger, 7,5 högskolepoäng
Basic Mathematics for Computer Scientists, 7.5 credits

Main field of study
Mathematics

Subject Group
Mathematics

Level of classification
First Level

Progression
G1N

Date of Ratification
Approved 2014-10-03
Revised 2016-06-15 by Faculty of Technology.
The course syllabus is valid from autumn semester 2016

Prerequisites
General entry requirements and Mathematics D or Mathematics 3c (Field-specific entry requirements 8/A8).

Objectives
After completing the course, the student should be able to solve problems, perform calculations, and conduct lines of reasoning within the part of mathematics that is covered by the course, and to communicate those solutions, calculations, and reasonings in writing.

Content
Numbers, logic, set theory, algebraic expressions, equations and inequalities, elementary functions, divisors, prime numbers, division algorithm, congruences, recurrence relations, induction, permutations, combinations, binomial theorem, complex numbers, complex plane, factor theorem, Linear equation systems, Gaussian elimination, matrices.

Type of Instruction
Lectures and seminars.

Examination
The course is assessed with the grades A, B, C, D, E, Fx or F.
The grade A constitutes the highest grade on the scale and the remaining grades follow in descending order where the grade E is the lowest grade on the scale that will result in a pass. The grade F means that the student's performance is assessed as fail (i.e. received the grade F).

The student's knowledge is assessed in the form of a written exam.

Course Evaluation

Under kursens genomförande eller i nära anslutning till kursen genomförs en kursvärdering. Resultat och analys av kursvärderingen ska återkopplas till de studenter som genomfört kursen och de studenter som deltar vid nästa kurstillfälle. Kursvärderingen genomförs anonymt. Den sammanställda rapporten arkiveras vid fakulteten.

Credit Overlap

This course cannot be part of a degree in combination with another course in which the content fully or partly correspond to the content of this course: 1MA141 Basic Mathematics for Computer Scientists, 7.5 credits

Other

Grade criteria for the A–F scale are communicated to the student through a special document. The student is to be informed about the grade criteria for the course by the start of the course at the latest.

Required Reading and Additional Study Material

Houston K.//How to think like a Mathematician, Cambridge, latest edition, 200 pages.

Required reading
Sullivan M.*College Algebra*, international edition. Pearson, latest edition. 800 pages.

Houston K.//How to think like a Mathematician, Cambridge, latest edition, 200 pages.

Kevin Houston, "How to think like a Mathematician", Cambridge Uni. Press, 2009

Material from the department