Linnæus University

Course syllabus

Faculty Board of Science and Engineering

School of Computer Science, Physics and Mathematics

1MD312 Matematikdidaktik - lärandet och lärarrollen, 7,5 högskolepoäng

1MD312 Mathematical Didactics - Learning and Teachers' role, 7.5 credits

Main field of study
Mathematics

Subject Group
Mathematics

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved by Organisational Committee 2009-12-01
The course syllabus is valid from autumn semester 2010

Prerequisites
The Pupil's Learning and Concept Development in Mathematics, 7,5 hec (1MD301), and Mathematics D or the equivalent.

Objectives

Having completed the course the student is expected to:

- be proficient in algebra, statistics, geometry, probability, arithmetic, equations, and functions
- demonstrate an ability to deal didactical with mathematical elements based on the pupils' understanding and with consideration to gender and social- and cultural aspects, and also draw conclusions from their own actions as teachers
- be able to analyse and didactically problemise national- and international surveys about teaching mathematics in schools.

Content

The course contents:

- work methods and learning

- national- and international evaluations and surveys about teaching mathematics in schools
- mathematical- and didactical approaches to problem solving, algebra, statistics, geometry, probability, arithmetic,equations, and functions
- didactical issues and research methods as regards teaching mathematics in schools
- social- and cultural aspects on learning and teaching mathematics.

Type of Instruction

Teaching consists of lectures, field studies, seminars and methodology sessions. The student's active participation is an important part of the teaching, individually and in groups, which requires obligatory attendance at seminars, methodology sessions and presentations.
This course is also offered as a distance tuition course.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

The course is examined through active participation at seminars, methodology sessions and presentations, as well as through a written exam and written and verbal presentations of individual tasks and group assignments.

Course Evaluation

A written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The course evaluation will be filed at the department.

Other

Having completed the training the student will receive a degree certificate upon request from the Graduation Office at the Division of Student Affairs.

Students who receive a passing grade in the course may download a course certificate through the Student Portal. Otherwise they may request a course certificate from the school secretary.

Required Reading and Additional Study Material

Required reading

Emanuelsson, G et.al. (ed.), *Matematik – ett kommunikationsämne*. Nämnaren Tema, NCM. Göteborg University, 1996. Pages 50 (210).
Emanuelsson, G et.al. (ed.), *Matematik – ett kärnämne*. Nämnaren Tema NCM. Göteborg University, 1995. Pages 100 (1609).
Emanuelsson, G et.al. (ed.), *Algebra för alla*. Nämnaren Tema NCM. Göteborg University, 1997. Pages 100 (160).
Compendiums, DFM. Linneaus University, current year. Pages approx. 100.
Löwing, M & Kilborn, W, *Baskunskaper I matematik för skola, hem och samhälle*, Studentlitteratur, 2002. Pages 100 (370).