Linnæus University

Jnr: 2015/4220-3.1.2

Course syllabus

Faculty of Technology
Department of Mathematics

1MD134 Matematikdidaktik 4 för F-3, speciella behov i matematik, 7,5 högskolepoäng

Mathematics Education 4 for pre-school class and year 1-3, special needs in mathematics, 7.5 credits

Main field of study
Mathematics Education

Subject Group
Mathematics

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved 2014-06-24
Revised 2015-12-22 by Faculty of Technology.
The course syllabus is valid from autumn semester 2016

Prerequisites
1MD131 Mathematics Education 1 for pre-school class and year 1-3 - Numbers-spatial perception and concepts of mathematics, 7.5 credits and 1MD132 Mathematics Education 2 for pre-school class and year 1-3 - Geometry, algebra, probability and statistics, 7.5 credits or equivalent.

Objectives

After completion of this module, students should be able to:

- describe how different students' math skills for concepts, representation, problem solving, communication and reasoning can be expressed in combination with different mathematics content, with an emphasis on mathematics content in pre-school up to year 3
- demonstrate knowledge and application of simple exercises to show how mathematical abilities may develop in students through a variety of content and working methods
- demonstrate an ability to use a variety of learning environments and working methods, including ICT, to support and challenge all pupils' learning in mathematics.

Content

The course aims to deepen students' ability to customize the content and approach in order to meet, challenge and develop all students' mathematical abilities, which includes a special educational perspective (individual, group, organization) are highlighted

a special educational perspective (individual, group, organization) are highlighted. Mathematics teaching as a phenomenon is addressed from different classroom perspectives (eg, student, teacher, communication, democracy, motivation, gender, ethnicity) and deepened through the study of scientific articles.

Module 1 0 credits

Type of Instruction

The course is conducted through lectures, seminars, methodology sessions and practical sessions. Field study days may be included. The teaching always requires mandatory attendance.

Distance teaching is possible. When given as a distance course special forms of distribution are used appropriate for the method of teaching.

To attend this course you need a field study class or group of pupils.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
The course is assessed partial through active participation in seminars, method meeting and presentations, partial through written and oral presentations of individual and group assignments. Some of examinations are practical elements (field studies) that the student implements and presents.

To receive a passing grade (G) the objectives has to be achieved. Students who do not pass the regular examination will be offered a second examination within six weeks during the regular semester periods.

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.

Course Evaluation

A course evaluation will be carried out and compiled after the course is completed. The compilation will be presented to the current board as well as to the students and filed.

Required Reading and Additional Study Material

Required reading

Myndigheten för Skolutveckling. Mer än matematik- om språkliga dimensioner i matematikuppgifter. (46 p). www.skolverket.se/publikationer?id=1891

McIntosh, Alistair. Förstå och använda tal: en handbook (latest edition). Göteborg: Nationellt centrum för matematikundervisning (NMC), Göteborgs universitet

Sterner, Görel & Lundberg, Ingvar. Läs- och skrivsvårigheter och lärande i matematik (latest edition). Göteborg: Nationellt centrum för matematikutbildning, Göteborgs univ. www.ncm.gu.se/node/468

Jess, Kristine, Skott, Jeppe & Hansen, Hans Christian. Matematik för lärare. My, Elever med särskilda behov (latest edition). Malmö: Gleerups

Pettersson, Eva & Wistedt, Inger. Barns matematiska förmågor - och hur de utvecklass. (latest edition). Lund: Studentlitteratur

Boaler, Jo. Elefanten i klassrummet: - att hjälpa elever till ett lustfyllt lärande i matematik latest edition). Liber

Malmer, Gudrun. Bra matematik för alla: nödvändig för elever med inlärningssvårigheter (latest edition). Lund: Studentlitteratur

Skolverket. Läroplan för grundskolan, förskoleklassen och fritidshemmet 2011

www.skolverket.se/publikationer?id=2575

In addition compendiums and scientific articles approximate 100 pages.