Linnæus University

Jnr: 2015/1964–3.1.2

Course syllabus

Faculty of Technology
Department of Mathematical Education

1MD143 Matematikdidaktik 3 för 4-6, Utvärdera och bedöma kunskap i matematik, 7,5 högskolepoäng

Mathematics Education 3 - year 4-6, Assess and grading knowledge in mathematics, 7.5 credits

Main field of study
Mathematics

Subject Group
Mathematics

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved 2013-12-16
Revised 2015-06-10 by Faculty of Technology.
The course syllabus is valid from autumn semester 2015

Prerequisites
1MD141 Mathematics Education 1 for year 4-6 - Numbers-spatial perception and concepts of mathematics, 7.5 credits and MD142 Mathematics Education 1 for year 4-6 - Numbers-spatial perception and concepts of mathematics or equivalent.

Objectives

After completing the course students will be able to:

- discuss and explain the role of the steering documents in mathematics education and through a so-called educational planning show how to work with it in mathematics education
- plan, implement, analyze and evaluate different forms of learning activities for primary school up to year 6 linked to the framework of mathematical skills
- reflect on theories of learning to see the link between skills, mathematics content and methods in mathematics education up to year 6 and apply this knowledge practically to meet and develop students' abilities and learning
- know and be able to describe stage relevant research from mathematics education which can be related to mathematics instruction up to year 6.
- analyze math tasks for purpose, content, knowledge, solution strategies, and critical aspects of student learning
- interpret goals and grading criteria for mathematics in primary school (pre-school up to year 6), with an emphasis up to year 6 and their impact on teaching and assessment of student performance

- analyze teaching and pupils' solutions of mathematical tasks and construct assignments and exams based goals for learning
- identify, document and assess students' knowledge and be able to analyze students' knowledge developing in mathematics.

Content

The course begins with an in-depth review of the policy documents, especially goals and grading criteria for primary school mathematics with emphasis up to year 6, as a starting point for understanding the primary school-specific conditions and practice. Their own mathematics knowledge is further developed by both solving and constructing their own task from a given mathematical content. Based on their own mathematics and mathematics up to year 6 the module consists of studies and analysis of students' solutions to mathematical tasks, teaching materials analysis, and analysis of mathematical tasks for the purpose, content, mathematical knowledge and developable solution strategies. Analysis of data and students solutions includes identification and assessment as a basis for the documentation of the student's knowledge and to support the student's continued knowledge development. Identification, assessment and grading of students' knowledge of mathematics discussed in the in-depth understanding of the relationship between skills and mathematics content and in relation to the current objectives.

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

During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

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: The course overlaps 1MD133 with 7,5 credits and Module 3 in 1MD130 and 1MD140.

Required Reading and Additional Study Material

Required Reading

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

Häggblom, Lisen. Med matematiska förmågor som kompass. Lund: Studentlitteratur

Pettersson, Astrid. Bedömning av kunskap: för lärande och undervisning i matematik (latest edition). Stockholm: Institutionen för matematikämnets och naturvetenskapsämnenas didaktik, Stockholms universitet

Hodgen, Jeremy; William, Dylan. Mathematics inside the black box : bedömning för lärande i matematikklassrummet (latest edition). Stockholms universitets förlag.

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.