



LD1006 Cognitive Psychology for Teachers: Mathematics 3.0 credits

Kognitiv psykologi för lärare: Matematikundervisning

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

The official course syllabus is valid from the autumn semester 2023 in accordance with the decision by the Head of the ITM School: M-2023-0163. Date of decision: 25/01/2023

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology and Learning

Specific prerequisites

General entry requirements only

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the student should be able to:

1. Describe and analyse how strategies from cognitive psychology and the course literature can be applied in different learning situations to improve students' learning in mathematics.
2. Give an account of how underlying cognitive processes such as long-term memory and working memory load influence students' ability to learn mathematics.
3. Design and apply learning activities that can justify and improve students' learning in mathematics and be able to explain advantages and disadvantages of such learning activities based on the course literature.

Course contents

The course intends to develop skills and abilities in understanding, analysing, planning and implementing learning strategies for improving students' learning in mathematics.

- Overview of research from cognitive psychology and how research results can be applied in learning situations.
- Critically review and evaluate research in the area of mathematics teaching.
- Design, develop and discuss learning activities that can be used in learning situations to improve students' learning.

Examination

- LEXA - Continuous Assessment, 3.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Continuous assessment. The examination components include e.g. multiple-choice questions, open-ended questions and case assignments. For a final grade, a Pass on all examination components is required.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.