# LD1030 Cognitive psychology for teachers: Mathematics 4.0 credits

**Kognitiv psykologi för lärare: Matematikundervisning**

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

## Establishment

The official course syllabus is valid from the summer semester 2025, according to the decision by the Faculty Board: HS-2025-0013.Date of decision: 2025-01-15

## Grading scale

P, F

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

General entry requirements.

## 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:

- 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.
- Understand how underlying cognitive processes, such as long-term memory and working memory load, influence students' ability to learn mathematics.
- Develop and reflect upon 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 aims to develop the student's skills and abilities in understanding, analysing, planning and implementing learning strategies that can improve students' learning in mathematics.

- Review of research within cognitive psychology and of how research results can be applied in learning situations in mathematics tuition.
- Critically examine and evaluate research in the area of mathematics tuition.
- Design, develop and discuss learning activities for mathematics tuition that can be used in learning situations to improve students' learning.

## Examination

- INLA - Hand-in assignment A, 2.0 credits, grading scale: P, F
- INLB - Hand-in assignment B, 2.0 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.

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

## 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.