Stockholms universitet

2026-10-12

Course description

Early Childhood Education: Focusing Mathematics and Technology,
12 credits (ECTS) (UB314F), full-time studies, 100% pace,
Autumn semester 2026

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Course structure

A detailed study plan is available on the course site within Canvas and can be accessed once you have registered for the course. The study plan describes how the teaching is structured. The plan also specifies what you need to prepare before each lecture or seminar, for example by reading specific literature or completing an assignment. You find the course literature list on the course website as well as on Canvas. Other important information about being a student at Stockholm can be found at the following web site: https://www.su.se/english/education/a-smooth-start/checklist-for-new-students

Course content

This course provides an introduction to the field of mathematics and technology in preschool. It covers both children's and students' own relationships to mathematics and technology, as well as mathematics and technology in relation to norms in society. The course considers children's mathematical activities and exploration in their daily lives.

In the course mathematics is understood as language and is studied using an exploratory approach, practical-aesthetic expression, play and dance. The course content is discussed in relation to the task of the preschool teacher and the objectives of the curriculum as well as different learning theories and knowledge traditions in relation to mathematics and technology.

Course module 1: Early Childhood Education perspective on Mathematics and Technology, 8 credits

The module gives an introduction to mathematics and technology in preschool from an Early Childhood Education perspective, it covers:

- mathematics and technology in preschool education — teaching and learning,
- an exploratory approach in relation to mathematics and technology,
- practical-aesthetic learning processes and play in relation to Early Childhood Education focusing mathematics and technology,
- learning theories and knowledge traditions in relation to mathematics, technology and norms in society.

Learning outcomes

In order to pass the course module Early Childhood Education perspective on Mathematics and Technology, 8 credits students are expected to be able to:

- account for how pedagogical strategies, practical-aesthetic learning processes and play in different teaching situations can contribute to support children's learning in mathematics and technology,

- demonstrate knowledge of children's learning, the role of the preschool teacher and the importance of the educational environment in Early Childhood Education focusing mathematics and technology,

- demonstrate knowledge of an exploratory approach in relation to the subject areas of mathematics and technology where concrete situations form the basis for children's learning,

- account for the relationship between observable mathematical and technical phenomena in preschool in relation to abstract explanations of mathematics and technology,

- reflect on how the preschool teacher's perspective on knowledge and learning as well as society's norms can constitute opportunities and obstacles for children's learning in mathematics and technology,

- account for different theoretical perspectives and their didactic consequences in relation to mathematics and technology.

Course module 2: Early Mathematics and Aesthetic Expressions, 4.0 credits

From a subject didactic perspective, the module provides an introduction to mathematics in preschool, it deals with:

- early mathematical concepts and activities,

- the mathematical areas: space, shape, position, direction, quantity, number, order, number concepts, measurement, time and change,

- how children's play, exploration of signs, symbols and other expressions as well as aesthetic expressions are important for mathematical learning,

- practical-aesthetic learning processes and play in relation to mathematics in preschool.

Learning outcomes

In order to pass the course module Early Mathematics and Aesthetic Expressions, 4 credits students are expected to be able to:

- account for children's early mathematical learning in preschool,

- demonstrate the ability to plan, apply and review mathematics education work in preschool,

- stage practical-aesthetic learning situations and play in relation to mathematics in preschool.

Education

Instruction is given in the form of lectures, seminars, workshops/laboratory work, individual assignments and group assignments.

Attendance

Attendance is compulsory for all seminars/all teaching sessions in the course.
In case of absence, contact the teacher of that particular course content. Make-up assignments will be accessed on Canvas after the seminar in question has been implemented.

Make-up assignments should be uploaded on Canvas in the assignment folder no later than [2026-12-22] at 17.00.

In case of absence from the oral presentation of the individual written assignment during seminar “Outdoors” 2026-12-11 contact the lecturer Linda Öhlund no later than 2026-12-16 for further instructions.

Examination

The course module 1 is examined by:

[**Course module 1**: Early Childhood Education perspective on Mathematics and Technology (part 1), 8 credits]

Individual written assignment

Grading scale: seven-point-grade

The assignment will concern children's opportunities to explore mathematics and technology in relation to some of the central concepts and ideas in the course and course literature connected to course module 1. It will take its point of departure in a video-clip that will be posted at Canvas at the same time as the assignment.

Instructions for the individual written assignment will be published 2026-12-18 in the 'Submission' folder in Canvas.

The Individual written assignment must be submitted at the latest by 2027-01-15 at 17:00 in the Submission folders in Canvas.

The course module 2 is examined by:

[Course module 2: Early Mathematics and Aesthetic Expressions, 4.0 credits]

Individual written assignment, feedback on a fellow student's assignment and an individual oral presentation

Grading scale: two-point-grade

The examination focus on mathematics and consists of different parts, one written examination including giving feedback on a fellow student's assignment, and one oral presentation.

The assignment will be introduced during the seminar 2026-11-24.

- A first version of the individual written assignment should be uploaded on Canvas in the assignment folder no later than [2026-12-04] at 17.00.
- Feedback on two fellow students assignments should be submitted via Canvas no later than [2026-12-09] at 17.00.
- Oral presentation of the individual written assignment during seminar "Outdoors" 2026-12-11.
- A final version – after feedback - should be uploaded on Canvas in the assignment folder no later than [2026-12-18] at 17.00.

Examinations should be graded no later than 15 working days after the examination date. The grade is published in Ladok. Feedback is provided via Canvas.

In order to view your final course grade in Ladok, all examinable and compulsory course components must have been completed and passed.

Re-examination

Re-examination, individual written assignment, course module 1

[Course module 1: Early Childhood Education perspective on Mathematics and Technology (part 1), 8 credits]

Instructions for the re-examination are published in the 'Submissions' folder in Canvas.

Submission deadline:
Submit the examination no later than 2027-03-05 at 17:00 in the 'Submissions' folder in Canvas. The examination will be graded no later than 15 working days after the submission deadline.

Completion of the grade Fx

Students who have received the grade Fx have the opportunity to supplement their submitted examination within one week after the examiner has communicated the need for supplementation.

Submission deadline:
Submit the examination no later than 2027-02-12 at 17:00 in the 'Submissions' folder in Canvas. The examination will be graded no later than 15 working days after the submission deadline.

Re-examination, individual written assignment, course module 2

[Course module 2: Early Mathematics and Aesthetic Expressions, 4.0 credits]

Instructions for the re-examination are published in the 'Submissions' folder in Canvas.

Submission deadline:
Submit the examination no later than 2027-01-29 at 17:00 in the 'Examinations' folder in Canvas. The examination will be graded no later than 15 working days after the submission deadline.

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Re-examination, oral presentation, course module 2

In case of absence from the oral presentation of the individual written assignment during seminar “Outdoors” 2026-12-11 contact the lecturer Linda Öhlund no later than 2026-12-16 for further instructions.

Information for students who took the course prior to the current semester

If you took the course prior to the current semester, you must contact the course administrator regarding re-registration on the course and registration for the course examinations no later than 2026-11-09. Re-registered students will take the examination at the same time as the regular examination occasion for Autumn Semester 2026.

Final grade for the course

In order to be awarded a passing final grade for the course, a minimum grade of E or G, is required for all examination assignments. In addition, all compulsory assignments must be completed and all required attendance fulfilled. The grade awarded for the individual written assignment (course module 1) will also constitute the final grade for the course.