



# FDM3305 Fostering Human Agency for AI-Mediated Learning 5.0 credits

Att stärka mänsklig handlingsförmåga i AI-medierat lärande

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

## Establishment

The official course syllabus is valid from the spring semester 2026 as decided by the Faculty Board: dnr PA-2026-0008. Decision date: 2026-01-27.

## Grading scale

P, F

## Education cycle

Third cycle

## Specific prerequisites

Admitted to doctoral studies.

## Intended learning outcomes

**After completing the course, the PhD student will be able to:**

1. Describe key theoretical perspectives on human agency in learning.
2. Explain how AI systems can support or constrain agency.

3. Critically analyze research cases where agency is shaped through design, pedagogy, or technology.
4. Apply theoretical frameworks to evaluate or propose learning environments that foster human agency.
5. Communicate advanced concepts of agency to interdisciplinary audiences.
6. Reflect on ethical, pedagogical, and societal implications of human–AI interaction in education.
7. Assess the role of agency in the student’s own doctoral research and articulate its methodological or conceptual significance.

## Course contents

**During the course, the PhD student will learn about the following topics:**

- Theoretical foundations of human agency: sociocultural, cognitive, sociomaterial, and ethical perspectives.
- Human agency in AI-mediated learning settings: autonomy, participation, and self-regulated learning.
- Sociotechnical and sociomaterial influences on agency through AI and learning analytics.
- Design principles for creating agency-supportive learning environments.
- Case analyses from AI in education, learning analytics dashboards, and human-AI interactions in learning and teaching.
- Ethical considerations and responsible AI frameworks.
- Integration of agency perspectives into doctoral students’ research projects.

## Examination

- EXA1 - Examination, 5.0 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.

- Pre-course written reflection (Pass/Fail).
- Active participation in all scheduled course activities (Pass/Fail).
- Final written assignment (Pass/Fail).

All examination components must be completed to receive a Pass.

## 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.