VRIJE UNIVERSITEIT AMSTERDAM

CRITICAL LEARNING IN THE AGE OF AI

SYLLABUS

VU Amsterdam Summer School

20 July – 31 July 2026

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Any general questions for the Summer School support team? Contact amsterdamsummerschool@vu.nl.

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Course Details

Title	Critical Learning in the Age of AI
Coordinator(s)	Mary-Jo Diepeveen, Isabel Braadbaart
Other lecturers	Denise Batenburg
Form(s) of tuition	On campus; interactive lectures, guided workshops, and collaborative activities
Approximate contact hours	48
Approximate self-study hours	36 (5 hours pre-course preparation + 31 hours during course)

Teaching staff (in order of appearance)

Isabel Braadbaart

Isabel Braadbaart is a jack-of-all-trades educator, with experience ranging from primary school to Master's level education. Her Master's degree in Education focused on the implementation of critical literacy skills within teachers' daily practice. Currently she works as lecturer, researcher, and programme coordinator at the VU Faculty of Science. She has extensive experience with designing for learning, effective didactic practices, and academic skills development, and supports two Bachelor programmes and a Master's programme. Additionally, Isabel is passionate about supporting starting lecturers in developing their professional and educational skills, and her research focuses on exploring the development of agency within this group.

Mary-Jo Diepeveen

Mary-Jo Diepeveen is a PhD candidate at the VU Faculty of Science, where she researches the integration of artificial intelligence in STEM education. She holds a Master's degree in Neuroscience from the University of Amsterdam and has over eight years of experience at Microsoft, where she is now a Senior Content Developer creating innovative learning experiences for diverse global audiences. Her expertise includes teaching and designing curricula in data science, machine learning, and AI. Her current research focuses on supporting inclusive and effective STEM teaching practices and developing frameworks that help educators navigate the opportunities and challenges of AI in the classroom.

Course description

Generative Artificial Intelligence (GenAI) is reshaping how university students read, write, think, and learn. Tools such as ChatGPT, Claude, and Gemini can summarise texts, generate essays, and provide instant feedback. Yet, these tools also challenge what it means to study, understand, and think independently. This course helps students explore how to safeguard

the quality, honesty, and depth of their learning in an academic world increasingly influenced by AI.

Across two intensive weeks, students examine how generative AI systems are built, how they shape study practices, and how they can be used responsibly. Through short lectures, group discussions, and interactive workshops, students analyze examples of AI-generated content, identify bias and misinformation, and link these insights to theories of learning, cognition, and ethics.

The first week focuses on personal learning and reflection. Students investigate how AI tools affect their study habits, apply learning theory to evaluate when AI supports or hinders understanding, and begin developing strategies for intentional, critical engagement with AI.

The second week expands toward systems and responsibility. Students map the stakeholders involved in AI and education, analyze power dynamics, and debate ethical questions about authorship, accountability, and academic integrity. They then create a Personal Education Plan (PEP) — a practical, values-based strategy for maintaining independent and meaningful learning in an AI-rich environment.

By the end of the course, students will be able to apply analytical, ethical, and reflective skills to make informed decisions about how to use generative AI in ways that protect and strengthen their own learning at university and beyond.

Learning objectives

1. Describe and explain how generative AI systems produce content and identify key features that distinguish AI-generated from human-generated work in academic settings.
2. Map and analyse the main stakeholders involved in the creation, use, and regulation of generative AI in education, highlighting their roles and interests.
3. Evaluate how generative AI influences key social and institutional contexts, such as universities, research, and media, and discuss implications for learning and academic integrity.
4. Apply core principles of learning theory to assess how AI tools can support or hinder their own study practices.
5. Analyse and reflect on their personal learning strengths and weaknesses using structured self-assessment activities.
6. Design an intentional balance between human and AI-assisted learning by developing strategies for critical, ethical, and independent engagement with AI tools.

7. Create and present a Personal Education Plan (PEP) that demonstrates how to use generative AI responsibly to safeguard the quality and honesty of their academic learning.

Assignments and Assessment

This course uses a combination of individual and group assessments to ensure students meet all learning objectives.

Individual assessments

Personal Education Plan (PEP) — 30% Each student submits a written Personal Education Plan (~1500 words) reflecting on their learning process, critically evaluating their engagement with generative AI tools, and outlining a values-driven strategy for responsible AI use. Tests LOs 5, 6, and 7.

Daily Logbook — 30% Students complete brief daily logbook entries (~100 words each) responding to structured reflection prompts. These entries encourage continuous reflection on how AI influences study practices. Tests LOs 5, 6, and 7.

Group assessments

Group Debate — 30% At the end of the course, students participate in a structured debate on the role of generative AI in effective learning. This group assessment tests collaborative skills, ethical reasoning, and the ability to defend a standpoint on how to preserve learning quality in AI-rich education. Tests LOs 2, 3, 4, and 6.

Group Presentation: Stakeholder Analysis — 10% In small groups, students prepare and deliver a short presentation mapping stakeholders in the generative AI ecosystem and analysing related power dynamics and educational impacts. Tests LOs 1, 2, and 3.

Minimum pass grade: 5.5 for each component. All assessed components must be submitted to pass the course. No extended deadline will be provided for final assessments. Active participation in class activities is expected and contributes to learning; engagement in discussions and workshops supports performance in all assessed components.

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Provisional reading list

Introduction to AI in education:

- 42 min video on AI in the classroom | Irina Jurenka fro Google Deepmind: https://youtu.be/MfI_WBxxamI?si=7UcMXH1t7MUsFQUm

Week 1:

- Korthagen, F. (2016). Inconvenient truths about teacher learning: Towards professional development 3.0.
- Black, P., & Wiliam, D. (1998). Assessment and Classroom Learning.
- Stefani, L. A. J. (1994). Peer, self and tutor assessment: Relative reliabilities.
- Goodrich Andrade, H. (2005). Teaching With Rubrics: The Good, the Bad, and the Ugly.

Week 2:

- Klar, M. (2025). Using ChatGPT is easy, using it effectively is tough?
- Wollny, S., et al. (2021). Are We There Yet? A Systematic Literature Review on Chatbots in Education.
- Dabis, A., & Csáki, C. (2024). AI and ethics: Investigating the first policy responses of higher education institutions to the challenge of generative AI.
- Hou, I., et al. (2025). "All Roads Lead to ChatGPT": How Generative AI is Eroding Social Interactions and Student Learning Communities.

Note: Readings will be made available via Canvas before the start of the course. Pre-course preparation (~5 hours) is required, including an assigned reflective activity and an “AI or Not?” exercise.

Course Schedule

Pre-course preparation (~5 hours, required before Day 1):
Students complete a visual learning-map workshop (2 hours) and an “AI or Not?” exercise (2 hours) before the course begins. Optional pre-reading (~1 hour) will also be provided via Canvas.

Schedule notes:

- Weekends off (no classes 25–26 July)
- Monday 20 July: classes run 10:00–15:00
- Wednesdays (22 & 29 July): morning sessions only, ending by 12:30; afternoons reserved for self-study
- Friday 31 July: classes end by 15:00

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Day	Date	Theme	Key Activities
1	Mon 20 Jul	How Do I Learn — and Where Does AI Fit In?	Introduction & orientation; sharing learning maps (prep work); group analysis: AI or Not?; How does AI impact my learning? Logbook starts.
2	Tue 21 Jul	How Do We Read? Factuality, Framing, and Perspective	Fact-checking challenge; debrief & source reveal; Perspective Shift workshop; synthesis discussion: whose truth counts?
3	Wed 22 Jul	From Learning Awareness to Learning Design	Case carousel: real learning struggles; debrief & learning theory intro; homework: revise learning strategy & peer feedback. Classes end 12:30.
4	Thu 23 Jul	Learning with AI: Tools, Boundaries, and Judgment	AI tools in learning; scaffold vs. crutch discussion; case discussions: grey zones in AI use.
5	Fri 24 Jul	Debate Day: AI and the Ethics of Learning	Debate setup & preparation; coaching on argumentation; live structured debate; debrief & reflection discussion.
6	Mon 27 Jul	What Is Good Education? Values, Tensions, and AI's Role	Brainstorm: what makes education good?; mini-lecture on educational purpose and theory; compare models (traditional, AI-based, peer-led); design challenge: ideal learning environment.
7	Tue 28 Jul	How AI Is Shaped — Prompting, Customisation, and Control	Mini-lecture: how GenAI output is controlled (prompting, RAG, fine-tuning, MCP); group exploration of output strategies; applied analysis: matching methods to use cases; discussion: transparency and power.
8	Wed 29 Jul	Stakeholders and Power — Who Shapes GenAI, and Who It Shapes	Mini-lecture: the GenAI ecosystem; group brainstorm: who has power, who has risk?; class stakeholder mapping. Self-study: scenario workshop. Classes end 12:30.
9	Thu 30 Jul	Designing Your Learning Future — PEP Workshop	Recap & roadmap; workshop: defining values and goals; strategy, boundaries & use cases; peer feedback on PEP drafts; create 3-statement PEP slide.
10	Fri 31 Jul	Final Debate, Sharing, and Looking Forward	Final structured debate; debrief; gallery walk (PEP slides); pub quiz; closing celebration. Classes end 15:00.