

AI Literacy for Educators

Building Student Literacy, Integrating AI Tools, and Cultivating Human Skills

Course Overview

This comprehensive professional development experience equips educators with the knowledge, skills, and ethical framework needed to effectively integrate artificial intelligence into their teaching practice. Artificial Intelligence is transforming education at an unprecedented pace, reshaping how we approach instruction, assessment, and student engagement.

Grounded in research-based frameworks and best practices, this asynchronous course explores three interconnected dimensions of AI integration: using AI as a productivity tool, building student AI literacy, and cultivating the uniquely human skills students need to thrive. Educators will engage in hands-on activities with AI platforms, collaborative discussions, and practical applications that connect theory to classroom practice.

Through structured reflection, hands-on tool exploration, and implementation planning, participants will learn to leverage AI while maintaining the highest standards for student privacy, pedagogical appropriateness, and human-centered education. This course emphasizes the essential role of teacher expertise and judgment in AI-augmented instruction.

Duration: 30 Hours Total — 3 Modules × 10 Hours Each

Target Audience: K-12 Educators, All Grade Levels & Subject Areas

Format: Asynchronous, Online Learning

The Three Pillars of AI Literacy

Teach With AI

Master AI as your teaching assistant to streamline administrative tasks, create differentiated resources, and enhance formative assessment

Teach About AI

Build student understanding of how AI works, its societal implications, and ethical considerations in an AI-driven world

Teach for AI

Cultivate irreplaceable human skills—creativity, critical thinking, empathy, collaboration—that complement AI capabilities

Course Learning Outcomes

By the end of this course, participants will be able to:

- Explain how AI systems work, including machine learning, training data, and neural networks, in age-appropriate language.
- Identify algorithmic bias in AI systems and teach students to critically evaluate AI tools for fairness and equity.
- Guide students in understanding digital footprints, data privacy rights, and responsible data citizenship.
- Facilitate classroom discussions about AI's societal impact, ethical implications, and limitations.
- Apply AI tools strategically to streamline administrative tasks while protecting student privacy.
- Master prompt engineering using the PREP (Prompt, Role, Explicit Instructions, Parameters) framework to generate high-quality, pedagogically sound outputs.
- Design differentiated learning experiences using AI while maintaining grade-level rigor.

- Generate effective rubrics and provide meaningful formative feedback with AI assistance.
- Evaluate AI outputs for accuracy, bias, and pedagogical appropriateness before classroom use.
- Design learning experiences that develop creativity, critical thinking, emotional intelligence, and collaboration.
- Teach students information literacy skills including verifying AI-generated content using CRAAP (Currency, Relevance, Authority, Accuracy, and Purpose) and SIFT (Stop, Investigate, Find, Trace) frameworks.
- Balance AI integration with essential human skill development using evidence-based pedagogical strategies.
- Develop and implement a comprehensive, personalized AI Integration Action Plan for sustainable classroom practice.

Module 1: Teach About AI (10 hours)

Building Algorithmic Literacy for the Next Generation

Guiding Question: How can I help my students understand, question, and navigate AI systems—so they can participate as informed citizens in a world increasingly shaped by algorithms?

Artificial Intelligence is no longer a distant future. It's woven into the fabric of your students' daily lives. From the recommendation algorithms shaping their social media feeds to the predictive systems influencing their educational pathways, AI is already here. But do your students understand how these systems work? Do they recognize algorithmic bias when they encounter it? Can they critically evaluate AI-generated content?

Module 1 equips you with the knowledge and pedagogical strategies to cultivate AI literacy in your classroom. You'll move beyond surface-level awareness to develop deep understanding of AI mechanics, societal implications, and ethical considerations. You'll focus on translating your new knowledge into age-appropriate lessons that empower students to be informed citizens, critical consumers, and responsible creators in an AI-driven world.

Learning Objectives

- **Demystify AI Fundamentals:** Explain core AI concepts such as machine learning, neural networks, training data, and algorithms in accessible, grade-appropriate language.
- **Unpack the “Black Box”:** Understand how AI systems learn from data, make predictions, and why they sometimes produce biased or inaccurate outputs.
- **Recognize Algorithmic Bias:** Identify real-world examples of algorithmic injustice and teach students to audit AI systems for fairness and equity.
- **Navigate Data Privacy:** Guide students in understanding digital footprints, privacy policies, and responsible data citizenship in the age of AI.
- **Facilitate Ethical Discourse:** Lead nuanced classroom discussions about AI's societal impact, from algorithmic bias to data privacy to the human implications of automated decision-making.

Module 2: Teach With AI (10 hours)

AI as Your Teaching Assistant—Amplifying Impact, Not Replacing Expertise

Guiding Question: How can AI tools augment my teaching practice to reduce administrative burden, personalize instruction, and enhance student learning outcomes while maintaining human-centered pedagogy?

As an educator, essential tasks such as creating differentiated materials, formatting assessments, or drafting parent communication consume precious time that could be spent where you make the greatest impact: connecting with students, designing transformative learning experiences, and responding to individual needs. What if AI could handle the time-consuming administrative burden while you focus on the irreplaceable human work of teaching?

This professional development module transforms how you work by strategically integrating AI tools into your teaching practice. You'll learn to leverage AI as a tireless assistant that drafts materials, generates ideas, and automates routine tasks, all while maintaining your essential role as the expert educator who guides, evaluates, and

refines every output. Through hands-on experimentation with real AI tools, you'll develop practical workflows that reduce your workload, personalize instruction at scale, and enhance student learning outcomes.

Learning Objectives

- **Master Strategic Prompting:** Apply the prep framework (Prompt, Role, Explicit Instructions, Parameters) to craft effective prompts that generate high-quality, pedagogically sound outputs.
- **Automate Administrative Tasks:** Use AI to streamline lesson planning, parent communication, meeting notes, and other time-consuming non-instructional responsibilities.
- **Personalize at Scale:** Generate differentiated reading materials, scaffolded assignments, and leveled practice activities that meet diverse student needs without multiplying your workload.
- **Enhance Assessment & Feedback:** Create rubrics, generate formative assessments, and provide timely, specific feedback while maintaining academic rigor and authenticity.
- **Establish Ethical Guardrails:** Develop protocols for protecting student privacy, verifying AI accuracy, recognizing AI limitations, and maintaining your professional judgment as the ultimate decision-maker.

Module 3: Teach For AI (10 hours)

Cultivating Human Skills—Preparing Students to Thrive in an AI-Augmented World

Guiding Question: What uniquely human skills must we intentionally cultivate in students to ensure they can leverage AI effectively while maintaining their creativity, critical thinking, and humanity?

As AI tools become increasingly capable of generating content, solving defined problems, and automating routine tasks, educators face a transformative question: What irreplaceable human capacities must we deliberately cultivate in our students? From the social media algorithms shaping their worldviews to the AI assistants they'll use in every career, your students will navigate a world where human judgment, creativity, and empathy become more valuable, not less. But developing these capacities won't happen by accident—it requires intentional pedagogical design across every subject area.

This professional development module equips you with research-based strategies to foster the uniquely human skills that AI cannot replicate. You'll learn how to cultivate creativity that generates truly original ideas, build critical thinking that questions algorithmic outputs, develop emotional intelligence that technology can't provide, and prepare students for careers and civic participation in an AI-augmented society—all while developing classroom policies and maintaining the deeply human heart of education.

Learning Objectives

- **Foster Creativity & Innovation:** Design learning experiences that develop original thinking, imagination, and the ability to approach problems with ingenuity AI cannot replicate.
- **Build Critical Thinking & Information Literacy:** Teach students to verify AI outputs, evaluate evidence from multiple perspectives, and make nuanced judgments requiring human values.
- **Cultivate Emotional Intelligence & Empathy:** Develop self-awareness, empathy, and relationship skills that enable authentic human connection technology cannot provide.
- **Facilitate Authentic Collaboration & Communication:** Move beyond surface-level group work to interdependent thinking and collective knowledge-building that requires the human capacities AI cannot replicate.
- **Prepare Students for AI-Augmented Careers & Citizenship:** Guide students to become informed, critical citizens who can navigate future work and participate meaningfully in societal AI decisions.

Assessment

Point Distribution & Grading

Session	Assignment	Points
Session 1	Initial Post	15
Session 1	Reply Posts	10
Session 1	Journal	24
Session 2	Initial Post	15
Session 2	Reply Posts	10
Session 2	Journal	24
Session 3	Initial Post	15
Session 3	Reply Posts	10
Session 3	Journal	24
Total		147

Requirements for MSDE Credit

All of the following requirements must be met for MSDE Credit to be issued:

- Learner participated consistently throughout the course. (Learner was not away from the course discussions for more than 6 consecutive days.)
- Each journal .
- Learner received a C or better as the overall course grade.

Statement of Academic Honesty & AI Use

All participants are held to high standards of academic honesty. Plagiarism, whether intentional or unintentional, is not acceptable and will result in the loss of credit for the assignment.

Use of AI Tools: Given the focus of this course, you are encouraged to use AI tools (such as ChatGPT, Claude, Gemini, MagicSchool.ai, or other AI assistants) as thought partners to help brainstorm ideas, organize your thinking, or explore course concepts. This hands-on experimentation is essential to developing AI literacy. However, all submitted work must reflect your own learning, critical thinking, and voice. AI-generated text should not be copied directly into assignments or discussion posts without significant personalization and reflection.

Documenting AI Use: For this course, you are required to document when and how you used AI tools in your learning process. Include a brief reflection at the end of major assignments describing:

- Which AI tools you used and for what purpose
- What worked well and what limitations you encountered
- How you evaluated and refined the AI outputs
- What you learned about AI's capabilities through the process

This transparency not only maintains academic integrity but also deepens your learning about AI's role in education. Example: "I used Claude to generate three different versions of this differentiation strategy, then critically evaluated each for pedagogical soundness and bias. I found that the AI struggled with [specific limitation], so I revised the approach to [your solution]."

Remember: The goal is to develop your capacity to work with AI effectively while maintaining your essential role as the expert educator who guides, evaluates, and refines all outputs.