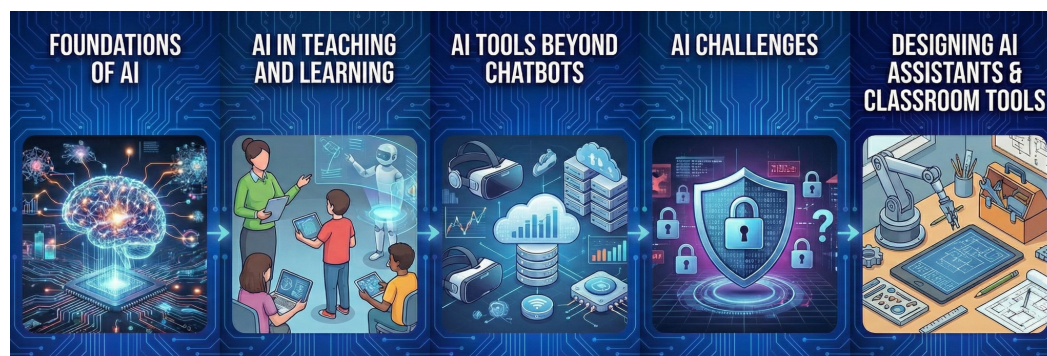


Applied AI for Educators: Professional Development for *All* Educators

Applied AI for Educators blends an asynchronous, self-paced course with live, facilitator-led sessions that support educators as they build foundational understanding and apply AI concepts to real instructional and professional contexts.



Course Overview (30-40 hours)

This course builds strong AI literacy for educators by combining foundational understanding of how modern AI systems work with practical classroom applications and critical safety considerations. Participants learn what AI is, how common AI systems are trained, and what capabilities and limitations teachers should understand before using AI tools in professional practice.

The course then shifts into hands-on, teacher-facing use cases—showing educators how AI chatbots and other AI-supported tools can assist with planning, instruction, differentiation, feedback, data tasks, and administrative work while maintaining professional judgment and academic integrity.

Across the course, teachers engage with interactive activities and realistic classroom scenarios to develop confidence using AI responsibly. The course emphasizes **transferable skills rather than brand-specific training**, helping educators apply what they learn across different district-approved tools and evolving AI platforms.

By the end of the course, participants will understand both the *how* and the *why* of AI in education—and will be prepared to **design custom AI assistants and describe apps and workflows that can be created using AI** to support their own professional needs.

Module Summaries

Module 1: Foundations of AI (8-10 hours)

This module establishes core AI literacy and shared vocabulary. Teachers learn what AI is, distinguish between types of AI (generative vs. predictive), and explore foundational machine learning concepts. The module introduces supervised learning, explains how AI models are trained, and builds a clear understanding of large language models.

Teachers also begin developing foundational prompting skills to understand how the way humans communicate with AI systems shapes output quality, usefulness, and reliability.

Topics include: What is AI; Generative vs. Predictive AI; Introduction to Machine Learning; Supervised Learning;

How AI Models Are Trained; Large Language Models; Foundations of Prompting

Module 2: AI in Teaching and Learning (8-10 hours)

This module focuses on practical classroom uses of AI chatbots, with a strong emphasis on teacher workflows. Educators learn how to use AI tools to support instructional planning and decision-making across a range of common teaching tasks. Activities guide teachers through using AI for brainstorming and idea generation, creating instructional materials, differentiating supports, tutoring-style interactions, reviewing student work, analyzing classroom data, and reducing administrative burden—while reinforcing the importance of teacher oversight and review.

Lessons include: Brainstorming and Innovating; Creating Content; Differentiation with AI; Tutoring with AI; Reviewing with AI; Analyzing Data with AI; Reducing Administrative Tasks

Module 3: AI Tools Beyond Chatbots (4-6 hours)

This module expands teacher AI literacy beyond chatbots by introducing additional categories of AI tools educators are increasingly encountering in schools. Teachers explore how AI image tools work, how text-to-speech tools can support accessibility and instruction, and how AI-powered search differs from chatbot-style responses.

The goal is to help educators understand the broader AI tool landscape and make more informed decisions about which tools fit which instructional or professional needs.

Focus areas include: AI Image Tools; Text-to-Speech; AI Search vs. Chatbot Responses

Module 4: AI Challenges (6-8 hours)

This module addresses the risks, ethical concerns, and real-world challenges of AI use in educational settings. Teachers examine how bias can appear in AI systems, why hallucinations occur, and how security vulnerabilities can impact reliability.

The module also explores deepfakes and misinformation and supports teachers in understanding academic integrity concerns, policy implications, and classroom practices that reduce harm while supporting responsible AI use.

Topics include: Ethics and Bias in AI; Hallucinations and Reliability; Security Risks; Deepfakes and Misinformation; Academic Integrity and AI

Module 5: Designing AI Assistants & Classroom Tools (4-6 hours)

This module shifts from using AI tools to designing with AI. Teachers learn how to create custom AI assistants by configuring roles, constraints, and behavior, and then explore tools that allow educators to describe apps and workflows in natural language so that AI can generate them, without requiring traditional coding skills.

The focus is on thoughtful design, practical creation, and building tools that address real educator needs—while maintaining safety, transparency, and professional judgment.

Focus areas include: Custom AI Assistant Design; Purpose-Driven Tool Design; AI-Assisted App Creation

Final Project: Applying AI Literacy to a Real Teaching Scenario (1-2 hours)

This final project serves as a capstone experience in which teachers apply what they have learned across the course to a real or realistic teaching or professional scenario. Educators identify an authentic challenge, select appropriate AI tools, and develop a thoughtful plan for how AI could support their work while maintaining professional judgment and responsibility.

The project emphasizes intentional decision-making, evaluation of risks and limitations, and the design of safeguards that ensure ethical, safe, and effective AI use in educational contexts.

Professional Development Alignment

Purpose of Professional Learning

This professional development course is designed to build educator capacity to understand, evaluate, and apply artificial intelligence tools responsibly in instructional and professional contexts. The course emphasizes informed decision-making, ethical use, and practical classroom application while maintaining educator judgment and oversight.

ISTE Standards for Educators – Alignment

This course aligns to the following ISTE Standards for Educators:

- **Learner**
Educators build foundational and applied understanding of artificial intelligence systems, engage in ongoing professional learning around emerging technologies, and reflect on the instructional implications of AI in education.
- **Designer**
Educators design authentic learning experiences and professional workflows that integrate AI tools intentionally. Participants design custom AI assistants and AI-supported instructional resources aligned to pedagogical goals.
- **Facilitator**
Educators use AI tools to support differentiation, scaffolding, feedback, tutoring-style interactions, and student review while maintaining instructional oversight and professional judgment.
- **Citizen**
Educators critically evaluate ethical considerations related to AI use, including bias, misinformation, data privacy, security risks, and academic integrity, and apply responsible practices in classroom and professional settings.

Professional Learning Competency Alignment

This course supports district and state professional learning priorities by developing educator competencies in:

- **Technology Integration**
Selecting and applying digital tools based on instructional purpose rather than novelty

- **Instructional Design & Innovation**
Designing AI-supported lessons, assessments, and workflows that enhance instructional effectiveness
- **Data-Informed Practice**
Using AI tools to summarize, interpret, and visualize instructional and classroom data responsibly
- **Ethical & Responsible Technology Use**
Recognizing limitations, bias, hallucinations, and security risks associated with AI systems and implementing safeguards in practice
- **Professional Judgment & Decision-Making**
Evaluating when AI use is appropriate, when it is not, and how to maintain human oversight in AI-supported environments

21st Century Skills (Educator-Focused)

This course supports the development of transferable, future-ready skills, including:

- Critical evaluation of AI-generated content
- Digital and media literacy in AI-supported environments
- Ethical reasoning with emerging technologies
- Adaptability to evolving digital tools and platforms
- Human judgment and responsibility in automated systems

Evidence of Learning & Impact

Participant learning and growth are demonstrated through multiple forms of evidence, including:

- Pre- and post-course self-assessment surveys examining educators' confidence with key AI concepts
- Hands-on exploration of AI tools and instructional applications
- Reflection on instructional decision-making and ethical considerations
- Design and submission of custom AI assistants or AI-supported workflows
- A capstone project applying AI to an authentic teaching or professional scenario

These artifacts provide clear documentation of educator growth, instructional impact, and alignment to professional development goals for district reporting and grant requirements.