

Course Title: AI: Enhancing Teaching and Learning with Artificial Intelligence	
Number of Content Modules: 4	Grade Levels: 5-12
Questions: 1-855-498-4400 PD@TeachnKidsLearn.com	TKL Catalog: https://teachingknowledgeloop.com/external-catalog
Course available completely online (24/7 and Self-Paced)	Assignments due by the end of the term

Course Description

The cutting-edge AI: Enhancing Teaching and Learning with Artificial Intelligence course aims to revolutionize your teaching approach and enhance student learning through the support of artificial intelligence (AI).

This course will help you save time by redirecting hours previously spent on planning and administrative tasks to direct contact with students. With AI assistance, your lessons can be differentiated and personalized in seconds to meet individual student needs.

Discover safe, responsible, and ethical methods for students to use AI to support their learning, and equip them with the skills necessary to identify bias and address potential misinformation in AI outputs. Learn how AI tools can help foster a classroom that ignites critical thinking, boosts learner engagement, and makes teaching and learning enjoyable!

Educators will learn about instructional strategies and accommodations they can use to support students with the use of AI strategies in the classroom, including the use of visual aids, modifications to the learning environment, and incorporating hands-on and experiential learning activities.

Throughout the course, educators will learn about the various artificial intelligence tools available and how they can help foster a classroom environment that genuinely ignites critical thinking, boosts learner engagement, and makes teaching and learning enjoyable!

Course Objectives

- CO.1** Develop a basic understanding of AI's evolution, including key definitions, how AI was created, and how it works. (Danielson Components: 3c, 4a, 4e)
- CO.2** Identify key milestones and breakthroughs in the evolution of AI and identify its possible use in teaching and learning. (Danielson Components: 1c, 1d, 1e, 3c, 3e, 4a, 4e)
- CO.3** Analyze the pros and cons of using AI technology in education and develop a plan for the safe and effective use of AI in the classroom. (Danielson Components: 1c, 1d, 1e, 3c, 4a, 4e)
- CO.4** Create practical strategies to integrate AI tools into daily routines to automate tasks, enhance time management, and maximize educator productivity. (Danielson Components: 1a, 1e, 1f, 3c, 3e, 4a, 4e)
- CO.5** Identify and explore AI tools that can enhance student engagement, encourage critical thinking and active learning, and provide personalized learning experiences for students. (Danielson Components: 1a, 1b, 1c, 1d, 1e, 1f, 2b, 3c, 3d, 3e, 4a, 4e)
- CO.6** Implement AI tools to enhance student learning through formal assessment, formative feedback, and personalized student feedback. (Danielson Components: 1b, 1f, 2b, 3a, 3c, 3e, 4a, 4e)
- CO.7** Understand and explain the ethical issues associated with using AI and analyze ways to foster responsible academic use, promote active learning, and encourage critical thinking. (Danielson Components: 1a, 1b, 1e, 1e, 2b, 3b, 3c, 3d, 3e, 4a, 4e)
- CO.8** Use instructional strategies to help students fact-check AI-generated content for accuracy and reliability. (Danielson Components: 1a, 1d, 2b, 3a, 3c, 4a, 4e)
- CO.9** Create engaging lessons using AI tools to personalize and differentiate instruction to meet diverse learner needs. (Danielson Components: 1a, 1b, 1c, 1d, 1e, 2b, 3a, 3c, 3d, 3e, 4a, 4c, 4e)
- CO.10** Identify potential biases, ethical concerns, and privacy implications that may be present when using AI systems. (Danielson Components: 1a, 1d, 2a, 2b, 3a, 3c, 4a, 4e)
- CO.11** Create lesson plans and classroom policies to educate students on the responsible and effective use of AI tools to strengthen student agency and enhance, not supplant, learning. (Danielson Components: 1a, 1b, 1d, 1e, 2b, 2c, 3a, 3c, 3e, 4a, 4c, 4e)

Course Outline

Course Introduction Module

Module Topics

In this module, you will learn about the course set-up, expectations for learning and collaborating, meet your colleagues, and reflect on your prior knowledge about teaching with artificial intelligence.

- Course Methodology & Navigation
- Course Description
- A Transformative Approach to Education
- Expectations and Community Agreements for Engaging in Brave Dialogue
- Community Building Circle: Course Story
- Course Objectives

Module 1: The Evolution of AI and its Use in Education

Module Topics

In this module, you will develop a basic understanding of artificial intelligence (AI), including what it is, how it was developed, how it works, and the pros and cons of using AI in teaching and learning. You will also learn about several AI tools and how to design effective prompts.

Section 1: The Development of Artificial Intelligence (AI) Tools

- Reflect on It! How Much Do You Know About AI?
- Learn About It! The Evolution of Artificial Intelligence
- Learn About It! What is Generative AI?
- Learn About It! Chatbots Ready and Willing to Chat
- Reflect on It! The Pros and Cons of Generative AI
- Practice It! Show What You Know

Section 2: Learning to Use Generative AI with Prompt Development

- Learn About It! Protecting Student Privacy
- Reflect on It! The Tools of the Trade
- Learn About It! Asking the Bots
- Learn About It! Creating Prompts That Get Results
- Master It! Designing Your Own Prompts

Module 2: Using AI to Increase Teacher Efficiency and Effectiveness

Module Topics

In this module, you will explore ways that AI-based tools can assist teachers with planning and increase productivity. You will also learn how AI-based tools can be used to design assessments and collect student feedback.

Section 1: Using AI to Increase Teacher Productivity

- Learn About It! Examining Teacher Use of AI for Teaching and Learning
- Learn About It! Curriculum Mapping
- Practice It! AI Helps Unpack and Customize Our Standards
- Practice It! Generating Content to Enhance Teaching
- Learn About It! Generating Content
- Practice It! Meeting Student Needs with Improved Lessons
- Reflect on It! Creating Deeper Learning
- Practice It! Using AI-Powered Tools for Assessment and Student Feedback
- Master It! Measuring the Three Levels of Learning

Section 2: Differentiating and Personalizing Learning

- Learn About It! Improving Reading for Students Who Need Support
- Learn About It! Solving the Language Barrier with AI
- Practice It! Improving School Communications
- Reflect on It! Increasing Engagement with AI-Based Activities
- Learn About It! Image Creation with AI
- Master It! Using Generative AI to Meet Student Needs

Module 3: Using AI to Deepen Thinking and Improve Student Learning

Module Topics

In this module, you will identify and explore AI tools that can enhance student engagement, encourage critical thinking, provide personalized learning, and help students fact-check AI-generated content for accuracy and reliability.

Section 1: Deepening Thinking and Improving Student Learning with AI

- Learn About It! Using AI to Improve Student Writing
- Reflect on It! Using a Chatbot's Conversational Strengths
- Learn About It! Deepening Student Learning Through Images
- Reflect on It! Creating Images for Teaching and Learning
- Reflect on It! Making Learning Meaningful
- Practice It! Using AI to Deepen Critical Thinking

Section 2: Identifying AI-Based Educational Tools for Student Use

- Reflect on It! Generative AI-Based Tools for Student Use
- Reflect on It! Engaging Students in Discussion and Collaborative Learning
- Reflect on It! Personalizing Learning with Technology
- Learn About It! Feedback and Assessment Tools
- Practice It! Creating Opportunities for Feedback and Assessment
- Master It! Deepening Student Learning with AI

Module 4: Promoting the Safe, Responsible, and Ethical Use of AI for Learning

Module Topics

In this module, you will understand the ethical issues, such as algorithmic bias surrounding AI use, and analyze ways to foster responsible academic use and promote critical thinking. You will also create classroom policies that educate students on the responsible use of AI.

Section 1: Understanding Bias and Prejudice in Artificial Intelligence

- Learn About It! Checking AI Output for Bias, Prejudice, and Discrimination
- Learn About It! AI Bias is Alive and Well
- Reflect on It! Facial Recognition and Deep Fakes
- Reflect on It! Concerns About Using AI in the Classroom
- Learn About It! Confirmation Bias and Misinformation
- Practice It! Show What You Know – Ethics and AI

Section 2: Encouraging Students to Use Artificial Intelligence Safely and Responsibly

- Learn About It! Using AI Responsibly for Learning
- Learn About It! Honoring Copyright
- Reflect on It! Fact-Checking AI Content
- Learn About It! Using Lateral Reading for Fact-Checking
- Practice It! Applying Lateral Reading to Verify Information
- Learn About It! Staying Safe Online
- Master It! Creating Classroom Policies for AI Use
- Master It! Evaluating AI Use in Schools

Module 5: Course Wrap-Up

Module Topics

In the Course Wrap-Up Module, you will reflect on your learning from the course and your mastery of the course objectives.

Section 1: Summative Reflection

- Reflect On It! Summative Reflection
- Reflect On It! Course Evaluation and Reference List