



# Syllabus

**Course title:** Artificial Intelligence (AI) for PreK-12<sup>th</sup> Grade Teachers

**What are the prerequisites for taking this course:** This course is for those who know nothing or have limited knowledge about Artificial Intelligence. It is meant to be a beginner's course so there is no prior knowledge needed. With that said, it is assumed that the participant at least have a bachelor's degree since the concepts are new and the assignments require that the individual know how to produce academic writings that are well-understood, exhibit critical thinking, and show forth academic quality.

**Summary:** What is AI? AI stands for Artificial Intelligence. Artificial Intelligence is the intelligence of machines and software to solve complex problems that formerly only human intelligence could solve.

The word "Artificial" refers to the fact that this intelligence is restricted to man-made machines and software and does not represent actual human thinking, decision making, moods, intuition, self-awareness, and human consciousness. Everything in Artificial intelligence is artificial. Strictly speaking, artificial intelligence refers to something man-made. If you walk into a room and you see two sets of fruit – with one set being organic fruit grown in your backyard, and the other set being made from plastic, the plastic fruit is called artificial because it was man made. In like manner, artificial intelligence is intelligence made by man and not organically grown.

The word Intelligence refers to the use of machines using algorithms that give machines the ability to solve complex problems that require multiple steps and are more advanced than simple computer programs that (a) perform searching (b) draw diagrams and (c) regurgitate simple output from simple input. The more complex AI tasks include – (a) winning a chess match, (b) producing a lesson plan for a teacher on the topic of the teacher's choice and (c) calculating the price of a home based on the sale price of homes in the area.

This course, while providing teachers an understanding of how to utilize AI for your needs, also has a strong cautionary component. Almost every lesson educates participants on how AI is merely a tool that must be wielded under the control, guidance, and mastery of the human educator. For instance, today there are many self-driving cars on the road that use AI to drive the car where it needs to go. These vehicles also use GPS maps to direct the car to its destination. Every good car manufacturer knows to put a warning message in the car's

dashboard such as, “When using this car’s autopilot, keep your hands on the wheel to avoid scenarios that our self-driving software cannot account for.” For example, you may be driving such a vehicle, and it moves to the left to exit, not knowing that the night before, cylinder blocks were put at the exit of the freeway. If a driver does not keep his or her hands on the steering wheel, it is possible for a crash to occur. All drivers of self-driving cars must be ready to take over the driving to avoid a crash. In like manner, all teachers who use AI must be equipped with the view that AI is a tool that they can use but that must always remain under their control. Do not “hand over” your classroom to AI and do not have an unfiltered trust in the output that AI programs give you.

With all of that said – be prepared to be amazed at how much time Artificial Intelligence can save you. From the very early lessons, you will see how you can cut the time in half for creating lesson plans, coming up with ideas for what to do on “rainy days”, how to have alternative ways for describing a new math concept, conduct interviews with historical figures from Abraham Lincoln to Kobe Bryant, and how to create quizzes and tests with full answers available for you. Of course you can play chess, hangman and monopoly with AI, but those are trite compared to its ability to help a young 5<sup>th</sup> grader learn Spanish.

In conclusion, you will be introduced to the world premier website for educators wanting to know how to set policy and give presentations on AI – for the sake of their classroom, their school and their district. This is a class you do not want to miss!

## **Course Outline**

**Lesson 1:** What is Artificial Intelligence (AI) and How Can Teachers Use It?

**Lesson 2:** Guiding Students Toward an Ethical Use of AI

**Lesson 3:** Saving Time by Providing Effective and Accurate Questions to ChatGPT

**Lesson 4:** AI for Designing Lesson Plans

**Lesson 5:** AI for Developing Relevant Scenarios for Students

**Lesson 6:** AI for Fostering Critical Thinking, Creativity, Communication, and Collaboration

**Lesson 7:** AI for Enhancing Learning in Specific Subjects

**Lesson 8:** AI for Making Connections to STEM Learning

**Lesson 9:** AI for Creating Visual Aids

**Lesson 10:** AI for Developing Videos

**Lesson 11:** AI for Personal Support, Scheduling, and Relief from Toxic Stress

**Lesson 12:** Key Elements of an AI Presentation for School Staff

**Lesson 13:** Final Project: Creating Your Own AI Presentation

**Activities:** Four main activities will be done by the participant:

- 1) Reading about AI and self-reflecting on one's fears and doubts about the tool.
- 2) Taking quizzes
- 3) Writing small educational compositions about AI and one's learning about the tool.
- 4) Interacting with other educators on forums to share ideas on how to use AI for the benefit of the classroom.

**Amount of time to finish:** This course will fly by, but the time should take 3 to 4 hours (depending on the person) for every lesson. Expect to finish the course in about 8 weeks when considering a teacher's busy schedule of a 60-hour work week. We recommend grabbing a cup of tea, sitting in your favorite chair, and going through the lessons in a relaxed manner. We have given this lesson special formatting by having all the text put into succinct power point slides that can be download if the teacher so desires.