



Understanding and Applying Artificial Intelligence in Education

EDUO 9326 3 Semester Credits/Units

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Course Syllabus

Course Overview:

Artificial Intelligence is rapidly transforming education. Teachers and students at all grade levels are increasingly engaging in AI usage. Leverage AI to complement your work as an educator. Gain an understanding of AI usage to personalize, equalize and maximize student achievement. Use AI chat tools to assist with curriculum planning and daily classroom management tasks. Develop and guide student experiences that support their ethical use of AI.

Course Learning Objectives: Course participants will have opportunity to:

- Gain an understanding of how Artificial Intelligence can support teaching and learning
- Understand the ethical and privacy concerns of AI in education
- Implement use of AI tools in your classroom to encourage innovative thinking and creativity
- Develop lessons and long-term plans for AI use

Course Relation to CCS or other Professional Standards

- [ISTE](#)
- [National and State Standards](#)
- [STEM/STEAM](#)

How to Submit Coursework

Each completed assignment in this course is submitted to the instructor for review. Follow directions at the end of each assignment on how to prepare and submit your assignments. Name each file submitted with your last name and assignment number (i.e. BrownAssignment3. Make sure you place your full name, course number and assignment number at the top of each document page. You will receive feedback from your instructor within 5 days indicating successful completion of the assignment or the need for revision. Assignment grades will be averaged for the final course grade.

Submit completed work to the corresponding Module dropboxes in Moodle

Course Modules / Assignments

Before starting the modules, the following 2 links will help establish the tone of the course. You may want to reuse these links in assignments.

Start Here [Teach AI | Prepare our students for the future](#)

Next –Go Here [How Will Schools Respond to the A.I. Revolution?](#)

Now dive in, learn, consider, imagine and create...

Module 1 – Understanding Artificial Intelligence Basics	
Objective	Gain a basic understanding of how AI evolved rapidly to the current level of usage in society and careers.
Assignment(s) Include Activities and Needed Materials	<p><i>There is one assignment in this module.</i></p> <p><u>This assignment and the Module 2 assignment are the backbone of the course. Both assignments require more than just a quick overview of AI. This assignment’s goal is to educate and look at AI’s impact.</u></p> <p>Assignment: Using a tool of your choice, create “Unpacking Artificial Intelligence” for a general audience that will give attendees more depth into understanding of AI. You will need to get a bit technical. Do your best to take from the resources information that will allow you to build a personal knowledge of current AI usage and where it is possibly headed, and to then weave that knowledge into your presentation. The content can touch on AI in education but save the bulk of that connection for the Module 2 assignment.</p> <p>1. General AI Understanding and applications.</p> <p>Use the following resources to learn the basics about Artificial Intelligence</p> <ul style="list-style-type: none"> • Discover The 5 Big Ideas Of AI With 2ring • Crash Course Artificial Intelligence (PBS) • Artificial intelligence • TED Talks on AI • Understanding What Artificial Intelligence Is, And What It's Not • 3 Simple Ways to Understand Artificial Intelligence (AI) <p><u><i>Submit Assignment to the Module 1 Dropbox</i></u></p>
Assessment	Assignments will be assessed using the course rubric

Module 2 – Artificial Intelligence in Education	
Objective	Explore current and future applications of AI to education.
Assignment(s) Include Activities and Needed Materials	<p><i>There is one assignment in this Module.</i></p> <p>This Module’s assignment and assignment 1, are the backbone of the course. Both assignments require more than just a quick overview of AI. Assignment 2 should inform and inspire.</p> <p>Assignment: Develop a comprehensive, professional-level Slide, Prezi, PPT, or Canva presentation to explain to a group of teachers at an AI conference the impact of AI on education. Use the following resources to assist with your presentation.</p> <p>Resources for Assignment 2</p> <p>Numerous resources are provided below. The list offers a variety of views and data</p>

	<p>from educational professionals and researchers. Select several for your use in this assignment. Also, refer to the addendum for additional resources.</p> <p><i>As you have heard by now and will learn in this course, the potential for AI to support education is still developing, developing rapidly! ChatGPT opened a future wave. Similar and innovative AI sites continue to be developed. These resources will help confirm and elaborate AI uses in education.</i></p> <p>Adaptive Learning Adaptive teaching: Rethinking the nature of learning in schools Kahn Academy</p> <p>Language Arts: Writing: Quill Learning a Language: Mondly Mondly Video</p> <p>Teachable Machine: Teachable Machine is a fast and easy way to create machine learning models (without any coding involved). Train a computer to recognize your images, sounds, and poses.</p> <p>Listen to This YouTube Star Says AI Will Become a Creative ‘Collaborator’ With Students The speaker discusses AI as a transformative use of technology. Listen for the pros and cons from her interview.</p> <p>Link to EdSurge AI is for Everyone, Everywhere. <i>View: Why AI is Important for All Students</i></p> <p>Additional assignment resources to gather information from to assist with this assignment.</p> <ul style="list-style-type: none"> • Artificial Intelligence in Schools Demands Real-World Responsibility • AI Is Changing the Workforce. At This District, It’s Changing the Curriculum Too. • How Is AI Used In Education — Real World Examples Of Today And A Peek Into The Future • What is AI for Kids? An Introduction to Artificial Intelligence for Kids • How Will Schools Respond to the A.I. Revolution? (including use of ChatGPT) • Revolutionizing Education: The Pros and Cons of Using ChatGPT in the Classroom • AI in education: Benefits, Examples and Future opportunities <p>Side Note: Look at this link. It is a glimpse of AI innovate ideas and careers for the next generation of coders that will emerge from classrooms. 20 Artificial Intelligence Project Ideas for Beginners to Practice</p> <p style="text-align: center;"><u>Submit Assignment to the Module 2 Dropbox</u></p>
Assessment	Assignments will be assessed using the course rubric

Module 3 – Ethics, Equity and Artificial Intelligence	
Objective	Examine AI Ethics and Equity
Assignment(s) Include Activities and Needed Materials	<p><i>There is one assignment in this Module</i></p> <p>Assignment: Submit content in your choice on the topic of Ethics, Equity and AI. Identify your audience and objectives at the start of your choice.</p> <p>Ethics resources:</p> <ul style="list-style-type: none"> • AI Ethics Guide (ISTE) • How Should We Approach the Ethical Considerations of AI in K-12 Education? • Lesson 1: Our AI Code of Ethics (code.org) • Lesson 5: Our AI Code of Ethics (unplugged code.org) <p>AI Ethics Research List</p> <p>Link to Code.org AI Resources View: Ethics & AI: Equal Access & Algorithmic Bias Ethics & AI: Privacy and the Future of Work How AI Works: Training Data & Bias</p> <p>Equity Resources How K-12 Data Analytics and AI Can Support Equitable Learning How Introducing AI Across the Curriculum May Address Key Equity Concerns (ISTE)</p> <p><i><u>Submit Assignments to the Module 3 Dropbox</u></i></p>
Assessment	Assignments will be assessed using the course rubric

Module 4: Use Different AI Chats to Create Assignment and Reports.	
Objective	<ul style="list-style-type: none"> - Compare the operation and results of 2 separate AI chats/resources to learn there are differences in how each “thinks” and how the information differs in format and content. - Use the information returned to create a lesson plan or a report. Each document will be lengthy. You will show the full results of your chat queries AND how you refined them results for use in a (A) lesson/unit plan or in (B) a report. <p>Before beginning A or B:</p> <ul style="list-style-type: none"> - Familiarize yourself with AI chat Resources in this document. - As an example, look through the results of using ChatGPT, CoPilot or Gemini to provide content for a 5th grade project, creating a presentation on the Western Movement in U.S. History in Moodle.
Assignment	There is one Assignments to submit in the Module. You have two choices, A or B. Each will need to follow the 4 Phases below.
	<p>A. Develop a complete lesson plan on a topic of your choice. The format of the lesson plan is your choice. You will use the results of your AI Chat to create your lesson plan.</p> <p>or</p> <p>B. Create a report on a single subject of your choice using a different AI Chat than used in A.</p>

	<p>Assignment to submit:</p> <p>Choice A) Using ChatGPT, CoPilot, Perplexity or another AI search/chat tool, start by entering a query/prompt <u>asking it to create a lesson or full unit plan on a topic in your area of education</u>. You are not asking for information; you are asking the chat to create the full lesson plan for you. The topic needs to be a broad topic, i.e. “The Westward Movement 5th grade”.</p> <p>Phase 1 – Ask the chat tool for assistance to help you create an assignment for your classroom.</p> <p>Phase 2 – Copy the results of the chat so I can see what it provided you.</p> <p>Phase 3 – Create a final assignment for your students. Edit the chat results so it mirrors your normal voice (figuratively) used when writing out an assignment. Cite your AI resource.</p> <p>Phase 4 – In a single paragraph, reflect on the value of using the chat tool.</p> <p>Phase 1 Decide on a topic/learning objective/standard or other item you would like ChatGPT to build a full unit of study for. Your query should be in the form of complete sentences or phrases: Examples: “I need to create a lesson plan on ..”; “What is the best way to have my students learn about ..”; How do I teach my students about...”; etc. Experiment to see what search entries work best to get adequate results for a full lesson plan. You may want to amend or add to the search with follow-up questions. Your search will be saved under your account.</p> <p>Phase 2 Copy the search results, unedited, along with the prompt(s) you entered, onto a Word or Drive document that you will submit for the assignment. If using Drive it will be shared with jherzdominicancourses@gmail.com. Do not submit/notify yet.</p> <p>Phase 3 – Beneath your Phase 2 content, Create a final assignment for your students. Edit the chat results so it mirrors your normal voice (figuratively) used when writing out an assignment. Cite your AI resource.</p> <p>Phase 4 – Reflect on the value of using ChatGPT or Bing in a paragraph.</p> <p>Choice B) Follow the same phases but the target audience is not your students. It would be an example of a product (paper/presentation) you would submit to a class you were taking for personal, professional education growth. Example: <i>“I have to write a research paper on the impact of chemicals used for farming in the United States during the last 100 years.” It needs to be 6 pages long and source five different primary sources.”</i></p> <p>Submit Module 2 Part A or B to the LMS or share via Drive with jherzdominicancourses@gmail.com Send a Drive Notify message.</p>
Assessment	Assessment will be based on the Course Rubric in this document.

Module 5 – Other AI Tools besides Chats	
Objective	Discover other AI creativity tools besides chats
Assignment(s) Include Activities and Needed Materials	<p>There is one assignment to complete in this module.</p> <p>Assignment: Summarize, using your choice, your experiences with the Module 4 AI resources or, AI discoveries on your own. Align your summary with K-12 current and potential education values to teaching and learning that AI can provide.</p> <p>No expectations but to try out and read the resources before completing the assignment. The level of needed tech skill is low to moderate. Perhaps you can get assistance from a colleague or student. Try.</p> <p>Pay careful attention to your privacy rights that MAY appear on some sites.</p> <p>Activity Resource Guides for Teaching Artificial Intelligence in K-12</p> <p>Select one activity to try. This is an OPTIONAL part of Module 3 for those comfortable or experienced with moderate-level technology tools and apps. Suggested: Select Chatbot with BERT (using free Scratch coding program)</p> <p>Resources:</p> <ul style="list-style-type: none"> • Chatbots in Education – Chatbots are AI driven resources most of us have used for research and assistance when online. Look deeper at their use in K-12 education, <ul style="list-style-type: none"> How Can We Use Chatbots in Education? Role of Chatbots in Education - 50 fun artificial intelligence (AI) pages you can use for free (Example of AI activities that show the power of AI programming, referred to as Machine Learning. - Quick Draw: Can a computer recognize doodles? Check out Quick Draw to help with machine learning research. - Word Draw - A fun AI (machine learning) example - AI Poem Generator - Microsoft’s Image Creator (requires a Microsoft account) - Monster Mash Sketch Modeling - Craiyon (free art design with optional membership) - Microsoft’s BING Chat - AudioPen - Eduaide <p style="text-align: center;"><u><i>Submit Assignment to the Module 4 Dropbox</i></u></p>
Assessment	Assignments will be assessed using the course rubric

Module 6 AI Lesson Experiences	
Objective	Develop classroom lessons on AI. Develop a long-term plan for AI use as an educator.
Assignment(s) Include Activities and Needed Materials	<p>There are two assignments in this Module. Develop classroom learning experiences that promote AI thinking and creativity that are based on available AI project and activities.</p> <p>Assignment could include discussions and resulting student project on:</p> <ul style="list-style-type: none"> - AI Today and the Future - The ethical implications of AI <p>Assignment 6.1: Create 2 lesson plans (suggested format) that will engage students in AI understanding. The lessons are based on the use of AI project and activities found in the Resources below or from previous course modules.</p> <p>Resources:</p> <ul style="list-style-type: none"> • Link again to EdSurge AI is for Everyone, Everywhere Scroll down – select from Get Started in Your Classroom, your category/language to select AI Project Guides (by ISTE) Review your grade level/subject guide. • ISTE Teacher Guides: Each contain several AI projects. • What is AI for Kids? An Introduction to Artificial Intelligence for Kids • AI activities for kids and the classroom: Top 10 Hands-On Activities (Both Online and Unplugged!) • 7 Fun AI Activities for Kids • Hour of AI: Alexa in Space <p>Assignment 6.2: Create a detailed Long-Term plan for the school year on AI usage in your classroom. Non-classroom teachers can develop a plan for use in their area that will support their work with students; parents or community or, to collaborate with teachers they work with.</p> <p>Use this Long-Term AI Planning form to complete your work. Share the plan with the instructor via Google Drive. Give full editing rights. <i>Submit Assignments to the Module 5 Dropbox</i></p>
Assessment	Assignments will be assessed using the course rubric

Module 7 Post to Course Forum (s)	
Objective	Post to an ongoing AI Discussion Forum
Assignment(s) Include Activities and Needed Materials	<p>Please post your experiences and thoughts on AI in education thus far in your educational role. Be candid. use non-“teacher talk”.</p> <p>Suggested items to share:</p> <p>Have you used it to develop curriculum or other needs in your ed area. Results?</p> <p>Have your students used it. Result?</p> <p>Future usage.</p> <p>Has your school or district established AI policies.</p> <p>Are there any parental concerns you are aware of.</p> <p>Any other items you would like to share are welcome. Please include your first name and last initial if you are comfortable doing so as I may like to ask you for more input to help with the course as it progresses along with AI usage.</p> <p><u><i>Submit Your Reply to the March 7 Forum Post started by Moodle Administrator.</i></u></p>
Assessment	Assignments will be assessed using the course rubric

Addendum

- [How K–12 Schools Can Use Artificial Intelligence in Education](#)
- [43 Examples of Artificial Intelligence in Education](#)
- [Understanding the Role of Artificial Intelligence in Education & Language Learning](#) (uses Mondly)
- [TED Talks on AI](#)
- [Microsoft’s CoPilot](#)
- [Google Gemini](#)
- [Perplexity](#)
- [Imagine Midjourney](#)
- [Magic School / Synthesia](#)
- [SchoolAI](#)
- [Khanmigo](#)
- [Brisk Teaching \(Chrome Extension\)](#)
- [IBM AI Education: Free On-Demand Webinars for K-12 Educators](#)
- [Hour of AI: Alexa in Space](#) Project STEM Curriculum AI Videos: Voice AI Basics Understanding the AI in Alexa
- [ChatGPT in the classroom: Here's what teachers and students are saying](#)
- [ISTE and AI](#) Artificial Intelligence in education Putting Educators and Students in the Driver's Seat
- [AL for Good](#) Providing technology and resources to empower organizations working to solve global challenges to the environment, humanitarian issues, accessibility, health, and cultural heritage. (Intel)
- [Microsoft CEO on new AI-powered search engine, the future of artificial intelligence](#)
- [eduidd](#)
- [Diffit](#) [Diffit for Teachers](#)
- [Canva AI Tools](#)
- [Dreambox Learning](#)
- [SlidesGo](#)
- [OpenAI CEO, CTO on risks and how AI will reshape society](#)

- <https://boredhumans.com/>
- <https://ai4k12.org/activities/>
- [How data and AI are changing the world of education](#)
- [7 Benefits of AI in Education](#)
- [Corporate Developers of AI in Education](#)
- [Coursera](#)
- [Squirrel](#)

Learning Modules / Assignments

Assignment Completion Choice: Unless a specific method is indicated in an assignment, choose the way you want to submit assignment so that it best suits the intended recipient(s). Select from word processing (Shared Drive or attached Word); presentation links or attached when possible (PP, Slides, Powtoon, Prezi); media shared or attached when possible (WeVideo, etc) Screencasts; Blog (Blogger); infographic. Consider using at least 2 different methods in the course.

- **Drive Use:** Share and give commenting rights to jherzdominicancourses@gmail.com
- **Online Presentations:** Share links to online presentations to jherzdominicancourses@gmail.com
- **Addendum:** View additional AI resources and programs.

Course Assessment Rubric:

EXCELLENT	ACCEPTABLE	NOT ACCEPTABLE
Meets or Exceeds Course Objectives: A to A-	Majority of Work Meets Course Objectives; B+ to B-	Needs Considerable Improvement: Resubmit Work Suggested: C or below
All work submitted reflects in-depth understanding of course objectives.	Most work submitted reflects in-depth understanding of course objectives.	Work shows little or no in-depth understanding of course objectives.
Assignment responses show evidence of new knowledge evidenced by thoughtful, detailed and accurate assignment responses.	Most assignment responses show evidence of new knowledge evidenced by thoughtful, detailed and accurate assignment responses.	Responses show little to no evidence of new knowledge as evidenced by lack of thoughtful, detailed and accurate assignment responses.
Work submitted was organized and clearly articulated. The student carefully followed all assignment instructions. The instructor did not have to provide continual assignment clarification or request revisions.	Most work submitted was organized and clearly articulated. The student carefully followed all assignment instructions. The instructor had to provide continual assignment clarification or ask for revisions.	Work submitted was not organized or not clearly articulated. The instructor had to provide constant clarification and ask for continued revisions.
Assignment content and required projects were original.	Assignment content and required projects were original.	Evidence that not all assignment content and required projects were original.
Work is free of spelling and/or grammatical errors.	Work has few spelling and/or grammatical errors.	Work has numerous spelling and/or grammatical errors.