



Empowering Educators: Leveraging AI for Course Design

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How many of you have used AI to design a course?

This isn't about AI replacing instructional designers...

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The course

- Summer 2023, 7-week graduate-level course
- Beginning Topic: "Collaborating with AI in Production for Instructional Technology"
- First Prompt:
- Design a course syllabus for the topic of collaborating with AI in the field of production in instructional technology. The students need to design and develop a product to use in education and/or training.

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The course

- Final Topic: "Collaborating with AI to Develop Instructional Materials"
- Give more detail in the prompt
- Refine, refine, refine
- Reading and evaluating output

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Process

- ChatGPT syllabus production
- Break the syllabus down into pieces

<https://chatgpt.com/share/68d87e68-eccc-8007-a7bc-fe9e7851b5b4>



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Process

- Had ChatGPT explain pieces of the learning objectives to me. For example:
- LO1: Understand the fundamental concepts and theories of AI and its role in instructional technology.
- I prompted:
- What are the fundamental concepts and theories of AI and its role in instructional technology?

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Process

- Had ChatGPT explain pieces of the learning objectives to me. For example:
- LO2: Analyze and evaluate existing AI technologies and tools in the context of education and training.
- I prompted:
- How would a professor introduce this topic to students: Analyze and evaluate existing AI technologies and tools in the context of education and training

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ChatGPT output

- To introduce the topic of analyzing and evaluating existing AI technologies and tools in the context of education and training, a professor could consider the following approach:
 1. Engage students with a real-life scenario: Begin the class by presenting a real-life scenario or case study where AI technologies have been used in education or training. This could be an example of an AI-powered adaptive learning platform, a virtual tutor, or a recommendation system. Discuss the potential benefits and challenges associated with these technologies.
 2. Highlight the importance of analysis and evaluation: Emphasize the significance of critically analyzing and evaluating AI technologies before integrating them into educational contexts. Explain that understanding the strengths, limitations, and ethical considerations of AI tools is essential for making informed decisions about their implementation.

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ChatGPT output

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I prompted:

- Give me a real-life scenario or case study where AI technologies have been used in education or training to present to higher education students in the class

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ChatGPT Output

Real-Life Scenario: AI-Powered Virtual Teaching Assistants

One compelling example of AI technologies being used in education is the implementation of AI-powered virtual teaching assistants in higher education institutions. These virtual assistants leverage natural language processing, machine learning, and data analytics to support instructors and enhance the learning experience for students.

In this scenario, a professor can present the case study of a prominent university that introduced an AI-powered virtual teaching assistant to assist faculty members in managing large class sizes and providing personalized support to students. The virtual assistant, named "EduAI," was designed to handle routine administrative tasks, provide quick responses to student inquiries, and deliver personalized learning recommendations.

Key features and benefits of the AI-powered virtual teaching assistant:

- Automated administrative tasks: EduAI streamlined administrative tasks such as attendance tracking, assignment submission, and grading, freeing up instructors' time for more meaningful interactions with students.
- Personalized support: By utilizing machine learning algorithms, EduAI analyzed students'

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My Prompts

- Provide me some Case studies on personalized learning platforms with AI for this class
- describe an educational lecture on interaction design with AI assistants and chatbots
- How can a student use AI in an instructional technology production course. For example audio AI, images AI, etc.
- design an assignment for a master's level class for understanding the different AI tools we can use in instructional technology

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My Prompts

- Give me a mini lecture on the current trends in AI integration in education
- provide me a synchronous 15 minute activity for this class on building a basic AI-driven conversational interface
- Give me a 15 minute lecture on the overview of AI and its applications in education and training
- give me a short asynchronous assignment for graduate students in this class to explore integrating AI-based recommendation systems

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Role of AI in course design

- Syllabus generation
- Assignment creation
- Lecture content development
- Rubric design

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Give as much detail as possible in your prompt

I have a project assignment for students to work in groups of 1, 2, or 3. Students will role play that they are either K12 teachers, higher education instructors, or in corporate training. They must collaborate with AI to come up with an educational problem that can be solved by collaborating with AI to design and develop an educational product or solution. This doesn't mean they need to do coding or create their own ai. They should use all of the different types of AI such as NLP, Audio, voice assistants, and/or Video in the final project deliverables. For example using message design, instructional design, visual literacy. It should be hands-on. They need to use three types of AI in the project. They can produce a prototype or finished product. Use the list you provided for design thinking frameworks to AI-driven product development above. Give me the assignment instructions and rubric for this assignment.

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Step-by-step process

- Initial planning and prompts
- Iterative refinement with ChatGPT
- Evaluation and customization
- Integration into LMS or teaching platform

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Let's try it...

- Real-time use of ChatGPT to generate a sample assignment or rubric
- Audience interaction: Suggest a topic and generate content together

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Challenges Encountered

- Accuracy and relevance of AI-generated content
- Ethical considerations
- Maintaining academic rigor
- Faculty and student reception

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Solutions & Adaptations

- HUMAN OVERSIGHT AND EDITING
- PROMPT ENGINEERING STRATEGIES
- FEEDBACK LOOPS WITH STUDENTS
- COLLABORATION WITH COLLEAGUES

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Successes and Impacts

- Improved efficiency in course design
- Enhanced engagement and interactivity
- Positive student outcomes
- Scalability for other courses

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Q&A session

- Share your experiences or ideas

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Resources

- Cindy.York@niu.edu

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