

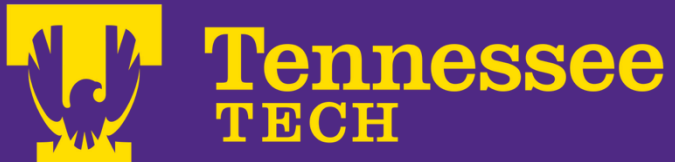
AI & Content Development



Summer Intensive 2025
Session 3

Agenda

10:00-10:30



Collaborating with AI for Course Content



Enhancing Student Engagement



Exploring Challenges & Key Takeaways



AI in Action

My Journey with AI: Insights on Collaboration, Content, & Engagement

Instructional Designer who collaborates with faculty on AI-related projects; many of the examples in this session come from that work

Currently pursuing my PhD in Program Planning & Evaluation

Research includes exploring AI's impact on education

Excited about bridging the gap between technology and teaching practices



Image created with Canva Dream Lab on April 1, 2025, using the prompt "create an instructional designer-style action figure based on my picture with accessories that include a computer, coffee mug, tablet, planner, and pens"

Collaborating with AI for Course Content

- **Supporting Guided Lecture Notes and Study Guides**
- **Generating Case-Studies and Real-World Scenarios**

What is Course Material Collaboration?

Working **with** AI to design and refine the materials that support your course, including:

- Syllabi and course outlines
- Lecture notes and slide decks
- Reading lists and curated resources
- Assignments and rubrics
- Brainstorming ideas that align with learning goals

AI can be a creative partner in the planning process—**not a replacement** for your expertise, but a tool to help you explore possibilities, save time, and personalize learning experiences.



Image generated with Canva Dream Lab on April 14, 2025, using the prompt "Generate an image of an instructor utilizing AI to create lecture notes or a podcast," with multiple options provided

Using AI for Course Content

Lecture Notes and Summaries

- Input a chapter or a research paper and AI can create a **concise summary** that highlights key concepts and learning objectives.
- AI tools like [Notebook LM](#) can even create **podcasts** based on content!

Open Educational Resources can be used in conjunction with AI within courses

- [OpenStax | Free Textbooks Online with No Catch](#)
- [OER Commons](#)

Topic Exploration and Depth

- AI can break down complex topics into digestible chunks

Prompt: Summarize this research article for undergraduate students. Highlight the main argument, 3 to 5 key findings, and the overall significance. Include a short list of discussion questions to encourage critical thinking.

What are other instructors doing?

- Generating **lecture notes, slides, summaries, videos** and **podcasts** based on key concepts.
- Creating **custom reading materials** by summarizing or reformatting academic papers for what best fits students' needs.
- Developing **interactive study guides** tailored to the course objectives.

Prompt: Create an interactive study guide based on this information, aligned with my course objectives and key concepts students need to understand.

Sources

+ Add

Discover

Select all sources

Getting Started with NotebookLM

✓

PDF

NotebookLM Features

✓

PL+

NotebookLM Glossary

✓

PL+

NotebookLM Troubleshooting

✓

PL+

Using NotebookLM As A Help Center Or Shared Knowledge Base

✓

PL+

Using NotebookLM For Research

✓

PL+

Using NotebookLM with Meeting_Interview Transcripts


✓




Click on the icon to listen to a sample podcast generated by NotebookLM on April 23, 2025

Chat

Generate a podcast within minutes!





Introduction to NotebookLM

7 sources

NotebookLM is an AI-powered tool designed to help users understand and work with their uploaded documents and other digital content. Users can upload various source materials into a "notebook" and then ask questions, receive summaries with citations, and generate different types of content like study guides and audio overviews. The platform utilizes a three-panel interface for managing sources, engaging in chat-based analysis, and producing outputs. NotebookLM offers both a standard and a Plus version with expanded features, including higher usage limits and analytics. It facilitates research, knowledge organization, and the creation of resources from user-provided information, supporting various file types and offering sharing capabilities.

Save to note

Add note

Audio Overview

Mind Map

Start typing...

7 sources

How does NotebookLM facilitate understanding and interacting with diverse uploaded information sources?

What core fea

Studio

Audio Overview

Introduction to NotebookLM

00:00 / 09:00

Notes

+ Add note

Study guide

Briefing doc

FAQ

Timeline

About this notebook

This notebook is designed to help you learn about NotebookLM's features while actually using the product. Start by clicking on this note to read it in its entirety. NotebookLM lets you read,...

Why can't I write a note?

This is a view-only public notebook, so you are limited to reading the sources and asking questions. You also can't create Notebook Guides like "Briefing Doc" or "FAQ." When you creat...

Make it personal!

Because this particular notebook includes sources that describe how NotebookLM works, the AI is skilled at giving you personalized advice about how to use the tool. Just describe what you'd...

2025

Using the Algorithm

Read the four case studies and then answer the questions below.



Ron



Taylor



John



Gina

Ron, a 50-year-old nonsmoking male, was recently invited by colleagues to participate in a 10-km trail run. He reports currently walking 40 min on Monday, Wednesday, and Friday -- something he has done "for years." His goal is to run the entire race without stopping, and he is seeking training services. He reports having what he describes as a 'mild heart attack' at 45 years old, completed cardiac rehabilitation, and has had no problems since. He takes a statin, an angiotensin-converting enzyme (ACE) inhibitor, and aspirin daily. During the last visit with his cardiologist, which took place 2 years ago, the cardiologist noticed no changes in his medical condition.

On a piece of paper, complete the table below. You will answer Yes or No in every section except for the Desired intensity; you will put either Moderate or Vigorous for that question.

Select each person to see if medical clearance is needed and why.



Ron

Medical clearance
needed for Ron?



Taylor

Medical clearance
needed for Taylor?



John

Medical clearance
needed for John?



Gina

Medical clearance
needed for Gina?

How can AI Generate Case Studies?

- AI can create real-world scenarios that encourage problem-solving and critical thinking
- **AI Tools for Case Study Creation:**
 - Example: Ask AI to generate a case study on ethical issues in business or classroom management strategies in education, even medical cases for nursing majors.
 - The image to the left showcases case studies that another instructional designer helped to create and then insert into our LMS (D2L).

Creating Real-World Scenarios with AI



Simulate real-world challenges in a variety of disciplines



AI can generate scenarios that reflect current global events or historical moments.



Example: AI can create a **business case study** around a company facing a **supply chain disruption** due to a natural disaster, with choices on how to navigate the crisis.

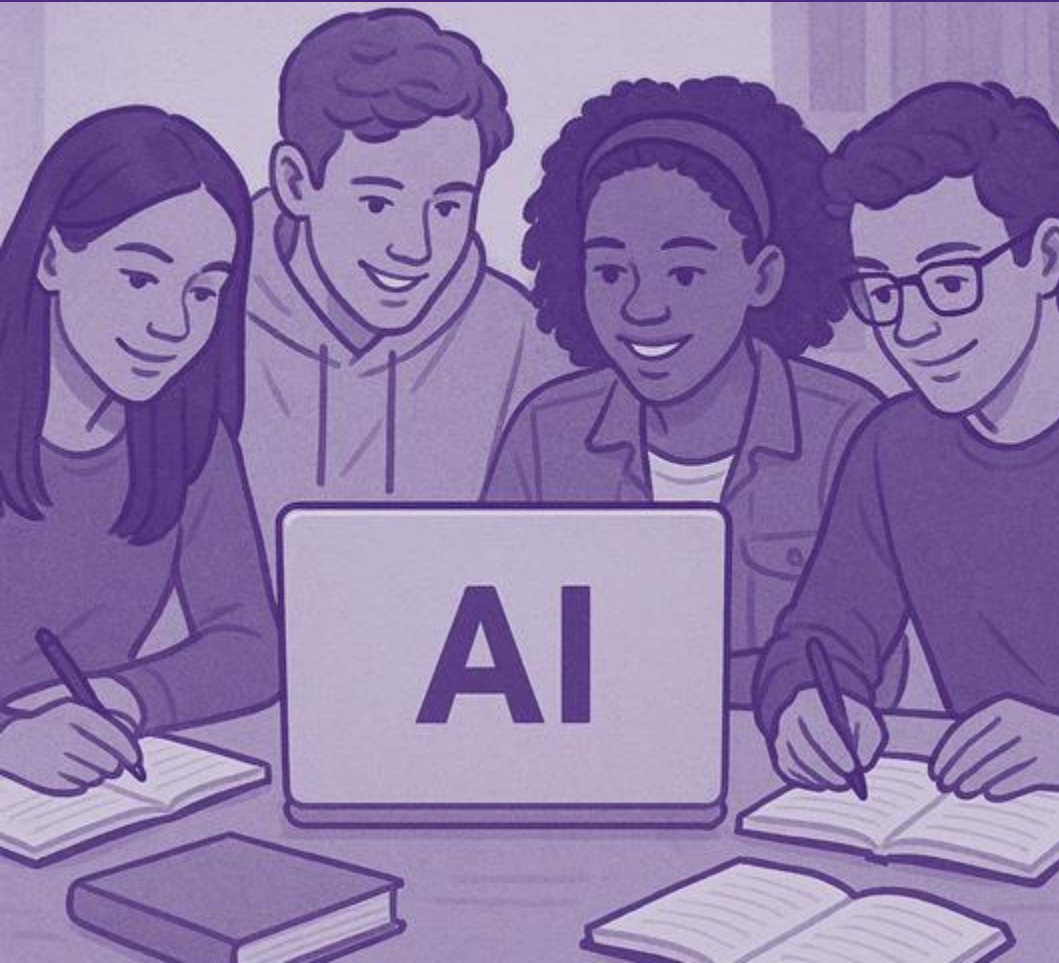


Example: Generate a **medical case study** about diagnosing a patient with **uncommon symptoms**, encouraging students to identify causes and treatment plans.

Enhancing Student Engagement

- **Interactive and Creative Content (Image Generation)**
- **Immediate Feedback and Formative Assessment**

How Can We Use AI to Design Interacting Learning Experiences?



If AI can help build content ***with us***, how can we use it with ***students*** to spark deeper engagement?

Image Generated Content Ideas



Agriculture & Environmental Sciences

Have students create images of crops affected by drought or soil deficiencies—then analyze whether the visuals accurately reflect real-world conditions.

Use AI to visualize sustainable vs. non-sustainable practices and discuss the differences.



Health Sciences & Nursing

Generate images of medical symptoms or care environments. Students can critique the realism and identify potential inaccuracies or stereotypes.



History & Social Studies

Ask students to create AI-generated representations of historical events or cultural moments. Follow up with a critique: What's missing? What biases might be present?



Literature & Creative Writing

Students can bring characters or scenes to life with AI images, then reflect on how well the visual captures tone, mood, and detail from the text.

Use visuals to inspire short stories or alternate endings.



STEM Disciplines

Visualize complex processes like photosynthesis, coding logic, or chemical reactions. Ask students to evaluate the scientific accuracy and make corrections.



Education & Psychology

Use AI to simulate classroom scenarios or developmental stages. Invite students to critique the realism and propose improvements.

Visual storytelling can be paired with reflective writing or instructional design practice.

AI as a Facilitator or Tutor

Use AI to
simulate
roles or
guide
learning in
personalized,
interactive
ways:

AI "Persona": Assign AI a role (e.g., tutor, lab assistant, peer reviewer) to support students.

Role-Play Scenarios:

- *Counselor*: Practice communication or empathy skills
- *Nurse/Patient*: Simulate clinical conversations
- *Client/Designer*: Prep for professional interactions

Feedback Generator: Students input work and get instant formative feedback.

Study Partner: Practice quizzing, summarizing readings, or explaining concepts.

Group Member: Brainstorm project directions or research topics.

Using AI to Enhance Course Materials and Engage Students



Curated Reading Materials

AI can summarize complex texts or generate simplified versions tailored to different reading levels.

For example, AI can extract key themes from academic papers, making them more accessible for diverse learners.

AI-Generated Discussion Prompts

AI can create thought-provoking discussion prompts based on course materials, encouraging deeper engagement.

These prompts can be tailored to students' individual learning progress and interests.

Adaptive Learning Resources

AI can generate additional readings, podcasts, or multimedia content based on individual students' needs.

For example, if a student struggles with a particular topic, AI can recommend supplemental resources for further exploration.

AI for Feedback & Formative Assessment

- **Quick Feedback:** AI tools can provide instant responses to student drafts, ideas, or quiz answers.
- **Formative Prompts:** Create reflective or low-stakes practice questions with AI assistance.
- **Skill Practice:** Students interact with AI to reinforce concepts (e.g., solving problems, rewriting sentences).
- **Rubric-Based Review:** Ask AI to simulate rubric-based comments for writing or projects.
- **Progress Checks:** Generate comprehension checks between major assignments.
- **Feedback Drafting:** Instructors can use AI to draft personalized comments more efficiently.

Supporting Student Engagement Beyond Course Materials

- Announcement Posts
- Weekly Communication
- Email Updates
- Discussion Prompts
- Reflection Questions
- Visual Aids or Infographics
- Student Reminders
- Course Recaps or Summaries



Exploring Challenges and Key Takeaways

- **Remember to Start Small**
- **Relationships Matter**

Challenges are Part of the Process

- **Tool overload:** Hard to know where to start or what's most useful.
- **Learning curve:** Takes time to explore and get comfortable with tools.
- **Quality concerns:** Content will need editing to fit your style and goals.
- **Accuracy issues:** AI can produce outdated or incorrect info.
- **Loss of voice:** Risk of materials feeling less personal or authentic.
- **Ethics & access:** Important to ensure content is inclusive and responsible.

Start Small with AI Integration

You don't have to overhaul your course all at once—start small and see what works best for you and your students.

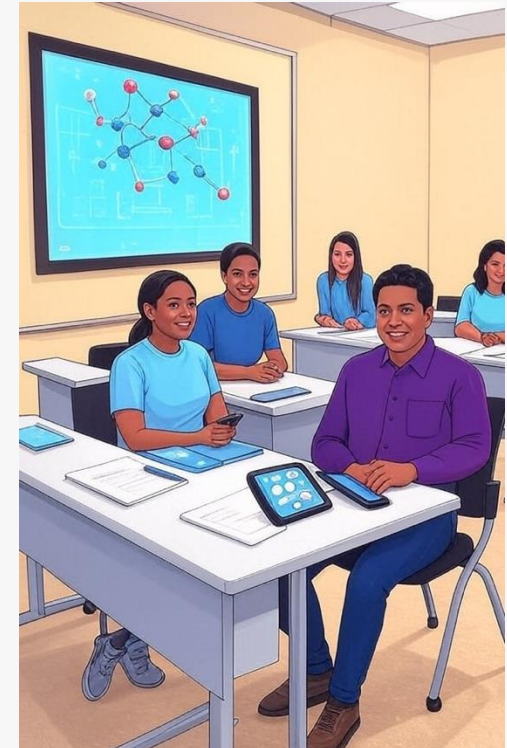
Pick one area to explore, like generating discussion prompts, study guides, or brainstorming engagement strategies.

Test in low-stakes ways—use AI to support your prep work before applying it in student-facing materials.

Reflect and revise—see what feels useful, what needs adjusting, and where AI truly adds value.

Build confidence over time—as you get more comfortable, you can gradually expand how you use AI in your workflow.

Keep it manageable and meaningful—small steps can still make a big impact.



Key Takeaways:

Relationships Matter

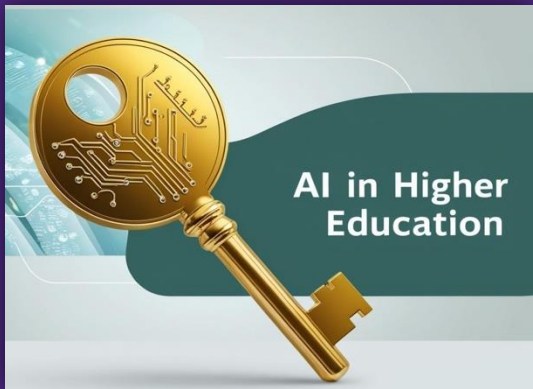


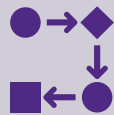
Image generated with Canva Dream Lab on April 14, 2025, using the prompt "create an image for Key Takeaways to represent AI in higher education using a key as a symbol"



Prioritize a **human-centered approach** by keeping learners' needs and experiences at the forefront of AI-assisted course design.



Treat GenAI as a **collaborative tool**—not a replacement—for subject matter expertise.



Establish a **continuous feedback loop** to refine and improve AI-generated content.



Stay current with AI developments and emerging best practices to make **informed, effective choices** in your workflow.

AI in Action

Take the next 5-7 minutes to think about a piece of content you could have AI assist with. Here are some ideas: case study creations, new guiding questions, etc.

AI in Action: Choose an AI to Explore

ChatGPT or Copilot

- Describe a real-world scenario related to your course content.
- Ask ChatGPT or Copilot to help you build a short case study or discussion prompt with 2-3 follow-up questions.

NotebookLM

- Upload or link to a reading, lecture notes, or a syllabus.
- Ask the AI to help you outline a short podcast script or talking points for a topic your students often find challenging.

Other AI Tool

- Choose an AI tool you've been curious about (Perplexity, Claude, Gemini, Canva AI).
- Try one task: summarizing content, generating guiding questions, or creating an image (Padlet option)

References & Resources

Ahmed, A. R. (2025). Navigating the integration of generative artificial intelligence in higher education: Opportunities, challenges, and strategies for fostering ethical learning. *Advances in Biomedical and Health Sciences*, 4(1), 1-2. https://doi.org/10.4103/abhs.abhs_122_24

Bobula, M. (2024). Generative artificial intelligence (AI) in higher education: A comprehensive review of challenges, opportunities, and implications. *Journal of Learning Development in Higher Education*, 30, 1-27. <https://doi.org/10.47408/jldhe.vi30.1137>

Choi, G.W., Kim, S.H., Lee, D., & Moon, J. (2024). Utilizing generative AI for instructional design: exploring strengths, weaknesses, opportunities, and threats. *TechTrends*, 68, 832-844. <https://doi.org/10.1007/s11528-024-00967-w>

Faccia, A., Ridon, M., Beebeejaun, Z., & Mosteanu, N. R. (2024). Advancements and challenges of generative AI in higher educational content creation: A technical perspective. In *Proceedings of the 2023 8th International Conference on Information Systems Engineering (ICISE '23)* (pp. 48-54). Association for Computing Machinery. <https://doi.org/10.1145/3641032.3641055>

- [AI learning hub - Start your AI learning journey and build practical AI skills to use right away. | Microsoft Learn](#)
- [Bridging Minds and Machines: Artificial Intelligence in Teaching & Learning](#)
- [Generate images with Dream Lab - Canva Help Center](#)
- [OER Commons](#)
- [OpenAI Academy](#)
- [OpenStax | Free Textbooks Online with No Catch](#)
- [NotebookLM: How to try Google's experimental AI-first notebook](#)
- [Prompt Library – AI for Education](#)