



Developing AI-Enhanced Curricula

GEA Webinar Series: AI Skill Building for Medical Educators
October 2025 (Session 6)

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Share Your Story!

What have you done with AI as a result of your participation in this series?
What new tools have you tried, and for what?
Have you formed your own AI community of practice?

Share your AI growth story with us.



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Disclosures

None

The College of Human Medicine Office of CME designates this event for a maximum of 1 *AMA PRA Category 1 Credit(s)*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.



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Introductions



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College of Medicine



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The Ohio State University



Chris Shaltry, PhD
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Learning Objectives

- Use AI tools to design curriculum components, including syllabi and learning objectives.
- Evaluate the effectiveness of AI in curriculum development.
- Evaluate the impact of bias and automation on educational equity and fairness.
- Integrate AI-generated content into curriculum mapping.

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Our Scenario



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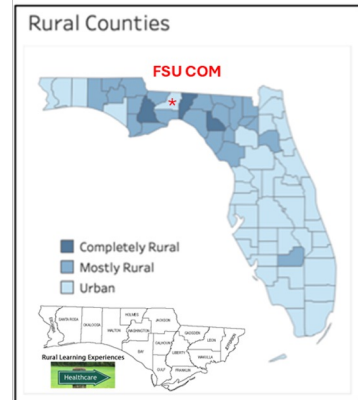
Background: To develop physicians who are responsive to the community needs of rural populations is one component of the FSU COM Mission.

- A full day trip (**Rural Learning Experience**) to one of 4 rural counties takes place half-way through the first semester.
- Small group sessions before and after the trip address didactic content, community health assessment methods, comparison of communities.
- The trip is grant-supported.

Task: Better integrate the RuLE trip and activities into the curriculum. Specifically, generate outcomes data linked to RuLE objectives, education program objectives, and grant objectives.

AI-assisted approach:

- Provide GPT with
 - Objectives of the RuLE trip and associated didactic sessions
 - Objectives of the supporting grant (STOs)
 - COM Education Program Objective (EPO-7)
- Prompt: Develop 10-12 MCQs suitable for Pre- and Post-tests of **rural knowledge** and **attitudes** of first semester medical students that address objectives of both the curriculum and the grant. For the Post-test include 4-6 short answer questions to reflect on changes in knowledge and/or attitudes and identify questions raised by the trip.



Source: Florida Legislature Office of Economic and Demographic Research. US Census Bureau.

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Drafting S.M.A.R.T. Objectives

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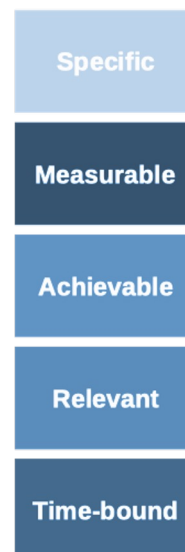
Lexicon (Today's Common Vernacular)

S.M.A.R.T.	Specific, Measurable, Achievable, Relevant, Time-bound
A-B-C-D	Audience + Behavior + Condition + Degree
SPARC	Self Reflection, Prompting Model, Accreditation Requirements, Research on Pedagogy, Critique
TRACI	Task, Role, Audience, Create, Intent
STO	Session Teaching Objectives
EPO	Entrustable Professional Objectives

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S.M.A.R.T. Framework (General)

- **Specific:** Clear and focused
- **Measurable:** Can be assessed
- **Achievable:** Realistic within course constraints
- **Relevant:** Aligns with course goals
- **Time-bound:** Includes a timeframe for achievement



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S.M.A.R.T. Course Objectives

The “Who, What, When, Where, and How” to making objectives specific, measurable, achievable, relevant, time-bound...



...AND mappable!

Works best **after** outcomes and mastery assessments have been established (“Backward Design”)

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S.M.A.R.T. Course Objective - Easy Mnemonics

A • **B** • **C** • **D**

Audience + **Behavior** [Verb] + **Condition** + **Degree**

Example:

"Given a blank map of the United States, the student will identify all 50 states and capitals with 90 percent accuracy."

The guidance we'll tell AI to use

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Sample Outcomes

Outcomes		Target %	%	N	D
2023-2024					
STO 13	% of medical and PA students participating in Marianna, Immokalee, and Tallahassee training sites will agree they are proficient in recognizing and understanding patients' healing traditions and beliefs as measured by the pre/post Cultural Competence Assessment.				
STO 14	% of medical and PA students participating in Marianna, Immokalee, and Tallahassee training sites will agree they are knowledgeable about the factors that contribute to variability in population health as measured by the pre/post Cultural Competence Assessment.				
STO 15	% of medical and PA students participating in Marianna, Immokalee, and Tallahassee training sites will agree they are skilled in asking questions that effectively elicit patient preferences as measured by the pre/post Cultural Competence Assessment.				

(document snippet)



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Results



STO-13-1

After completing the RuLE site visit in Marianna, medical and PA students will identify and explain at least three local patient healing traditions and beliefs with 85% accuracy as documented in a post-visit reflection within one week.

STO-13-2

After participating in a facilitated cultural competence debriefing, medical and PA students will demonstrate accurate recognition of culturally influenced healing practices in 4 out of 5 standardized case vignettes during the Cultural Competence Assessment.

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Validation (Audience + Behavior [Verb] + Condition + Degree)



STO-13-1

After completing the RuLE site visit in Marianna, **medical and PA students** will **identify and explain at least three local patient healing traditions and beliefs** **with 85% accuracy** as **documented in a post-visit reflection within one week**.

STO-13-2

After participating in a facilitated cultural competence debriefing, **medical and PA students** will **demonstrate accurate recognition of culturally influenced healing practices** **in 4 out of 5 standardized case vignettes** **during the Cultural Competence Assessment**.

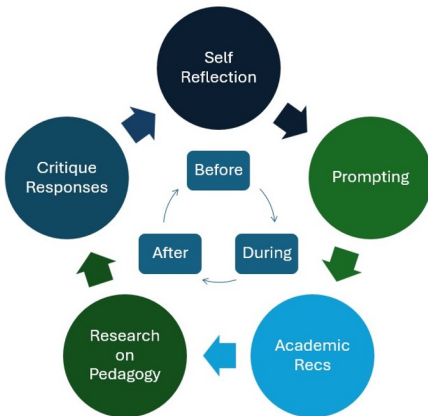
...plus confirmation by SME

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Prompting w/SPARC Framework

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SPARC Prompting



Before

- Self Reflection (Human Centering and Agency)

During

- Prompting Model (Context)
- Accreditation Requirements (Grounding)
- Research on Pedagogy (Grounding)

After

- Critique (Human Centering and Agency)

Hurtubise, L., (2025). AI-SPARC a reflective framework for prompting AI when used as an educator's thought partner. AAMC. <https://www.aamc.org/about-us/mission-areas/medical-education/advancing-ai-across-academic-medicine-resource-collection>. Accessed Oct. 14, 2025.

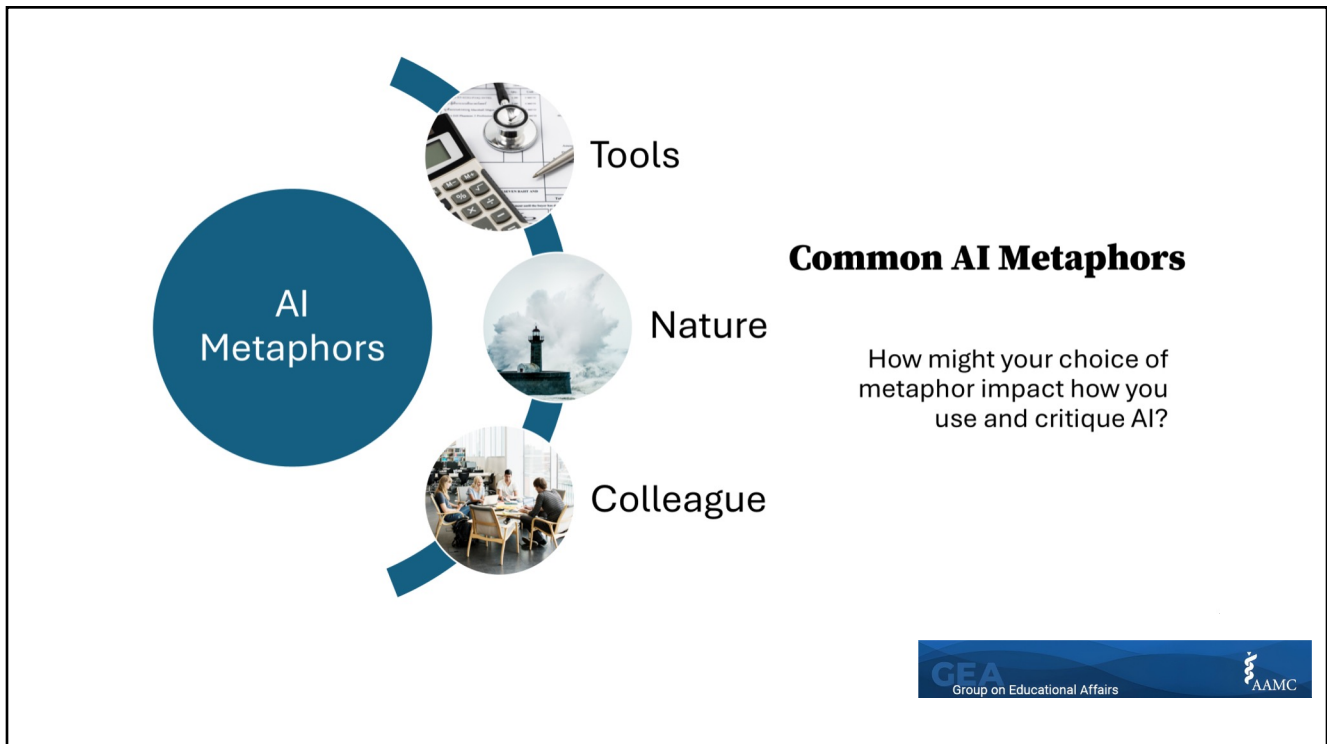
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Self Reflection

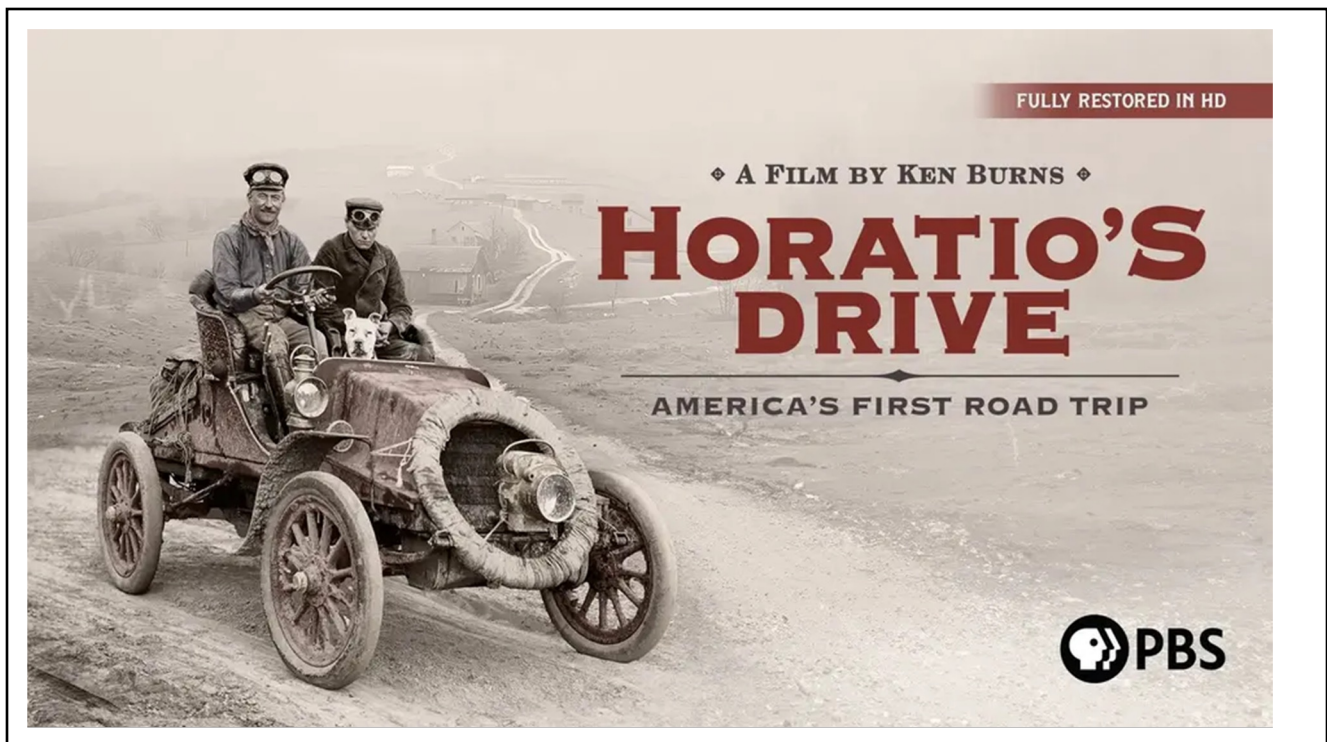
Using AI is like ...



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Prompting-TRACI

TASK refers to general type of output that the prompt should achieve

ROLE refers to the title or persona of the 'person' who will present the response

AUDIENCE refers to the title or persona of the 'person' who the response is designed to reach.

CREATE provides clear instructions about desired format of the response.

INTENT indicates the overall intention or purpose of the prompt

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TRACI Prompting

TASK Develop cases

ROLE Curriculum director

AUDIENCE Students

CREATE 3 distinct cases highlighting rural medicine context

INTENT Develop MCQ and simulate patient questioning

Academic Requirements and Research on Pedagogy

- Objectives from FSU Rural education program
- [Handbook for Rural Health Care Ethics](#)

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Grounding AI

Accreditation Standards

- Specialty Competencies
- MedBiquitous
- Knowledge base
- Course Organization
- SMART Objectives

Research on Pedagogy

- Active Learning
- Clinical Reasoning
- Master Adaptive Learner
- Simulation
- Patient Centered Medicine

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Rural Education Prompt

You are the **curriculum director** for the **Rural Mission of Florida State University**. Using the the **attached guide**, **develop 3 case vignettes of patients common to rural medicine**. Each case should be **distinct and highlight the rural patient care context**. The cases will be used to **develop multiple choice questions** to assess the learners ability to **demonstrate accurate recognition of culturally influenced healing practices STO-13-2** and ask **at least four open-ended questions that elicit patient preferences STO-15-1**.

Go Slow And ask me questions so that your response is more helpful.

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Question from AI

To ensure the case vignettes are as relevant and helpful as possible for the FSU Rural Mission, could you specify which unique rural Florida cultural groups or subpopulations (e.g., migrant workers, Seminole/Miccosukee tribes, or a specific major industry like fishing or agriculture) the program most often serves?

The unique rural Florida cultural groups or subpopulations the program most often serves are ...

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Critiquing the Response

Case Vignette 1: The Herbal Remedy and Hypertension

Case Vignette 2: The Fishing Boat Captain and Telehealth

Case Vignette 3: The Elder and End-of-Life Decisions

Rationale MCQs and questions for patients

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Breakdown for Current Scenario

- Rural Ed program - independent events and grant funding
- Developed SMART objectives for Rural Ed Program
- Prompted using SPARC with objectives and literature to develop cases to be used in assessments

>> *Next: Mapping assessments to entire FSU curriculum*

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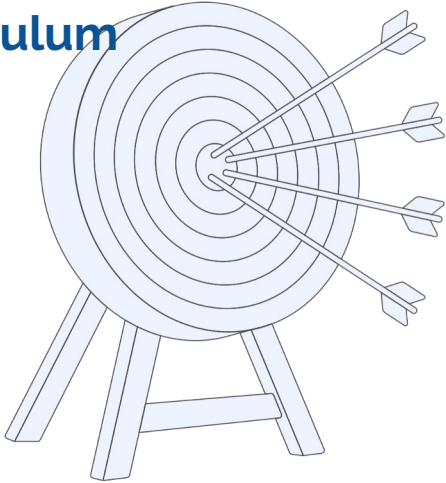
Align Assessments to Objectives

(Mapping/Alignment)

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What is Curriculum Alignment?





Learning Objectives

Desired outcomes of education



Curriculum Content

Material taught to achieve objectives



Instructional Methods

Strategies used to deliver content



Assessments

Tools to measure learning

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Why Curriculum Alignment Matters in Medical Education

Misalignment can lead to unintended overlaps, gaps and inconsistent outcomes. Alignment remedies this issue by creating clear connections between what's taught, what's learned, and what's assessed.

1

Session Teaching Objectives (STOs)

Define specific, measurable achievements for individual sessions, building blocks of your curriculum.

2

Entrustable Professional Objectives (EPOs)

Broader program-level clinical competencies. STOs must strategically support these goals.

3

Course Content

In this example, content such as assessments and assignments must support both STOs and EPOs.

Alignment ensures objectives, content, teaching methods and assessments form an integrated system.



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How AI Can Be Helpful in Curriculum Alignment

AI looks **beyond keywords** to link concepts across your curriculum, allowing you to better spot overlaps and gaps in objectives, content, and assessments.



Semantic Analysis

Language processing detects meaningful similarities between objectives (e.g., STOs and EPOs) and curriculum content, understanding context and intent **beyond keywords**.



Efficiency Gains

Dramatically reduces manual review time while increasing accuracy and consistency in curriculum mapping.



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The Need for Alignment

Content/Assessments

Case Vignette 1
Case Vignette 2
Case Vignette 3
Quiz 1
Quiz 2
Quiz 3

Objectives

STO-13-1
STO-13-2
STO-14-1
STO-14-2
STO-15-1
STO-15-2

Objectives

EPO 1
EPO 2
EPO 3
EPO 4
EPO 5
EPO 6
EPO 7

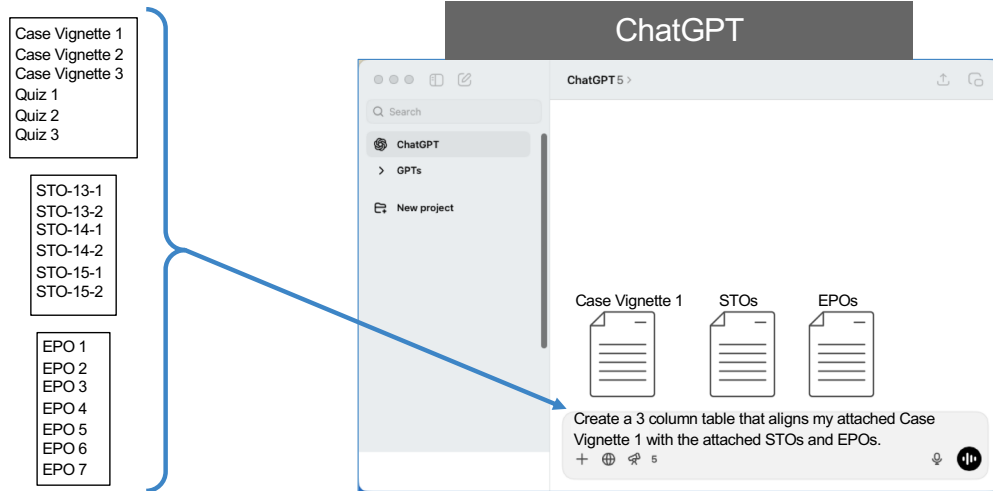


The alignment process (defining relationships across our content and objectives) can get very confusing and time consuming.



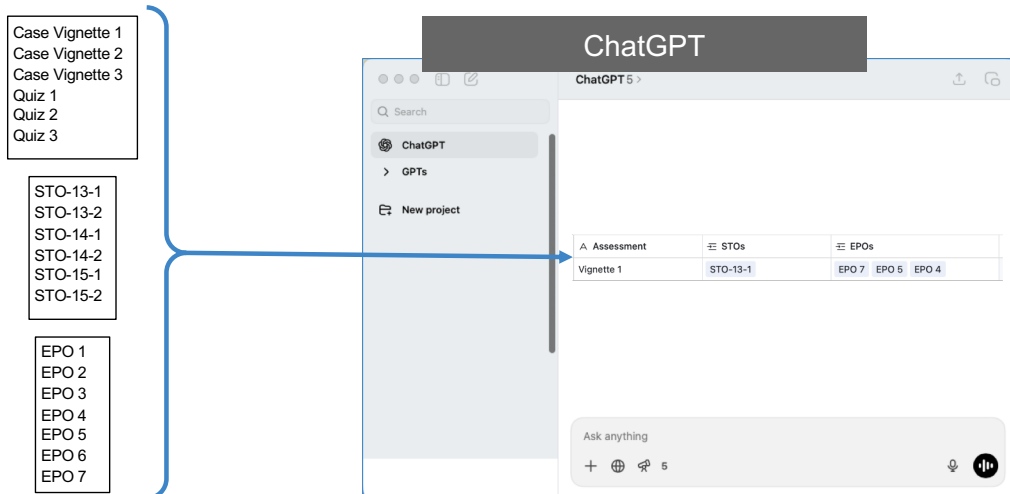
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Transforming Our Approach with AI



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Let AI Do the Alignment Work for You



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Organizing Your Alignment Data

Airtable

- This works well as a central hub for alignment, linking objectives, activities, and assessments with real-time dashboards.
- Combines spreadsheet familiarity with relational database power.
- Supports attachments (e.g., assignments), linked tables, tagging, and forms; cloud-based collaboration; strong visual customization.

Microsoft Lists + Power BI

- Very close match to Airtable's lightweight relational tables.
- Integrates natively with Teams and SharePoint for collaboration.

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Example View in Airtable

Airtable

Curriculum Map ▾ STOs EPOs ▾ + Add or import				
≡ Grid view ▾ Hide fields Filter Group Sort				
	Record ID	Assessment	STOs	EPOs
+ Create new...	1	Case Vignette 1	STO-13-1	EPO 7 EPO 5 EPO 4
Find a view	2	Case Vignette 2	STO-13-2 STO-14-2 STO-13-1	EPO 7 EPO 5 EPO 4
Grid view	3	Case Vignette 3	STO-14-1	EPO 7 EPO 2
	4	Quiz 1	STO-14-2 STO-15-1	EPO 7 EPO 2 EPO 6
	5	Quiz 2	STO-15-1 STO-13-2	EPO 4 EPO 1 EPO 7
	6	Quiz 3	STO-15-2	EPO 4 EPO 5 EPO 1 EPO 7
	7			
	+			

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CME ACTIVITY INFORMATION

Activity Name: Enduring: Developing AI-Enhanced Curricula

Date: October 19, 2025 – May 14, 2028

Activity Code: 95293

Speaker Name: Tonya Anderson, MAEd, APRM, LSSBB; Larry Hurtubise, PhD; Nancy L. Hayes, PhD; Chris Shaltry, PhD

Target Audience: Regional physicians, residents, students, faculty

Learning Objectives: *at the conclusion of this educational activity, learners will be able to:*

Objective 1: Use AI tools to design curriculum components, including syllabi and learning objectives.

Objective 2: Integrate AI-generated content into curriculum mapping.

Objective 3: Evaluate the effectiveness of AI in curriculum development.

Objective 4: Evaluate the impact of bias and automation on educational equity and fairness.

Accreditation Statement:

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Michigan State University designates this activity for a maximum of 1.0 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Summary of Financial Disclosures:

All planners, reviewers, faculty presenters have nothing to disclose.

Commercial Support Disclosure:

No commercial support was provided for this CME activity

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 - Enter your email and password to log into the system. You will be required to create a profile if you have not used the system before.
 - Enter the activity code provided on this sheet.
 - Complete the evaluation and attest to your time in attendance, then follow the screen instructions to print your certificate. Make sure your computer is set to allow pop-ups from the site or the certificate will not show.

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