rriculum Alignment and Evaluation

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ument maps Session 4 learning objectives to teaching, practice, and assessment. It also provides an evaluation plan across Ki –4, a session survey, and an annotated reading list.

culum Alignment Matrix

slide numbers refer to the Session 4 lecture deck. MCQ numbers refer to the revised question set. Kirkpatrick levels are detaile on Plan below.

e (abbreviated)	Bloom's level	Lecture (slides)	PBL	Structured Controversy	MCQ	Evaluation
e the four principles	Remember / Understand	6	Case 1, Q1	Debrief grid (all four)	—	L2: debrief grid rubric
principles to indications and integration of outputs	Apply / Analyze	7–14	Case 1, Q2 & Q6; Case 2, Q3	Rounds 1–3	1, 5, 6, 7	L2: MCQ pre/post; L3: observa card
e transparency and e (care, learning, research)	Understand	15–16	Case 1, Q2	Term sheet; Round 1	2	L2: MCQ pre/post
principles to when/how AI closed	Apply / Evaluate	17–18	Case 1, Q2, Q4, Q5	Rounds 1–3 (disclosure arm)	2	L2: MCQ; L3: OSCE disclosur station
my and justice where ccept, question, or decline	Apply / Evaluate	19–20	Case 1, Q3, Q5	Entire activity (opt-out question)	3	L2: MCQ; L3: OSCE decline-response checklist
e environmental impact of	Remember / Understand	21	Case 2, Q1	—	—	L2: Case 2 worksheet
n clinical benefit against ental cost	Apply / Evaluate	22–24	Case 2, Q2–Q5	Round 3 (third-way proposals)	4	L2: MCQ pre/post
tool, not a team member	Understand / Apply	25–26	Case 1, Q6; Case 2, Q4	Debrief closing prompt	3, 8	L2: MCQ; L3: observation car

the matrix. Every objective is taught (lecture), practiced (PBL and/or controversy), and assessed at Level 2 or higher. The tw
s are deliberately assessed through structured writing rather than MCQs — definition-level recall is necessary, but it is not whe
s difficulty lives.

ation Plan — Kirkpatrick Levels 1–4

uation plan includes behavioral and results-level measures, with feasibility tiers so each participating school can implement the
s.

— Reaction

ession survey (below), about five minutes. Core signal: perceived ability on each objective, value of the Structured Controversy

2 — Learning

e/post

t MCQs, administered before the session (or asynchronously as pre-work) and after. Paired scores give an objective learning m
ctive cluster.

inciple Debrief Grid

d as an exit ticket from the Structured Controversy and scored 0–8 with its rubric. This is the structured evidence for the two 'de
s and for principle application to a live case.

worksheet (optional)

submit their policy proposal from Case 2, Question 5. A one-point checklist — names a requirement, an owner, a trigger — veri
nental objective in applied form.

3 — Behavior

tation, 3–6 months post-session

rdized patient asks, unprompted, “Is AI being used in my care?” while an ambient scribe is nominally running; later in the case
the scribe.

oses the recording in plain language, before or when asked
ains what the tool does and where its output goes

s the right to decline without penalty
rs the decline gracefully and adjusts the documentation plan
er disparages nor oversells the technology

y tier: schools without OSCE capacity insert the first and fourth items into an existing communication station.

ip direct-observation card

PA-style card for preceptors, completed once per student per relevant rotation:

es AI-generated content before signing
oses AI documentation tools to patients when material
ains an AI-informed recommendation in their own clinical reasoning — and owns the decision

ted, this is the curriculum's primary behavioral endpoint.

self-audit (low-cost tier)

hip midpoint, students log one real encounter involving an AI tool and write three sentences: what they disclosed, what they ve
y decided. Reviewed in existing mentoring structures; doubles as reflective practice.

— Results

experience signal

ffiliated clinics use ambient scribes, add two items to existing patient-experience surveys: “I understood whether AI tools were
and “I felt able to say no.” Trend, not baseline, is the metric.

ntation-safety signal

ote-audit programs exist, tag AI-drafted-note errors caught before versus after signature. The ratio is a proxy for verification be

onal-policy signal

consortium institutions whose AI procurement process includes external-validation requirements and an environmental-impact
e line, measured annually — the curriculum's intended long-range fingerprint.

ion caveat

utcomes are influenced by far more than one preclinical session. These indicators are monitored as consortium-level context,
as session effects. A separate consortium evaluation working group should own this layer.

on Evaluation Survey

tems (1–5, strongly disagree to strongly agree)

this session, I can define beneficence, non-maleficence, autonomy, and justice, and apply them to a specific AI use in clinical
explain when and how the use of AI in diagnosis or decision-making should be disclosed to patients, and why the answer diffe
ss tools.
describe what patient autonomy requires when patients accept, question, or decline AI in their care.
describe the environmental impact of AI in healthcare and weigh it against a tool's clinical benefit.
describe the role of AI as a tool, not a team member, and what that means for my own responsibility.
Structured Controversy was a valuable use of class time.
ecture content was clearly presented and appropriately paced.

ence self-assessment (retrospective pre/post)

ng a defensible one-paragraph AI disclosure for a clinical setting.
ing both sides of an AI ethics question without collapsing into one.

ended

t was the single most valuable thing you learned in this session?
t is one thing about this session that could be improved before it is taught again?

ed Reading List

owing readings support the session. Distinguish empirical findings from conceptual frameworks, and check current local poli
guidance.

amp TL, Childress JF. Principles of Biomedical Ethics, 8th ed. Oxford University Press, 2019 (Chapter 1, excerpts).

onical text on the four principles.

, Shah NH, Magnus D. Implementing Machine Learning in Health Care — Addressing Ethical Challenges. N Engl J Med.
3(11):981–983.

non-specialist application of the standard ethical framework to clinical machine learning.

yer Z, Powers B, Vogeli C, Mullainathan S. Dissecting racial bias in an algorithm used to manage the health of populations.
6(6464):447–453.

-as-proxy-for-need study behind PBL Case 1, Question 6.

, Otles E, Donnelly JP, et al. External validation of a widely implemented proprietary sepsis prediction model in hospitalized p
tern Med. 2021;181(8):1065–1070.

rnal-validation study behind the Structured Controversy's performance figures.

n Medical Association. Professionalism in Health Care Systems. Code of Medical Ethics, Opinion 11.2.1. https://code-medica
ma-assn.org/ethics-opinions/professionalism-health-care-systems — Institutional conditions for professional judgment, care qua
ble use of decision-support systems.

A's formal position on physician obligations when using AI.

ng J, Islam MA, Ren S. Making AI Less "Thirsty": Uncovering and Addressing the Secret Water Footprint of AI Models. 2023 (

f the water-footprint estimates; assign the introduction and discussion only.

an MJ, Sherman J. Environmental impacts of the U.S. health care system and effects on public health. PLoS ONE.
6):e0157014.

re's own emissions footprint — the context that makes AI stewardship an extension of an existing obligation.

M, Char D, Xu SH. Ethical Obligations to Inform Patients About Use of AI Tools. JAMA. 2025;334(9):767–770.

re norms are evolving quickly; a current perspective helps students see the standard as live, not settled.