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# AI-ready Without the Foundation

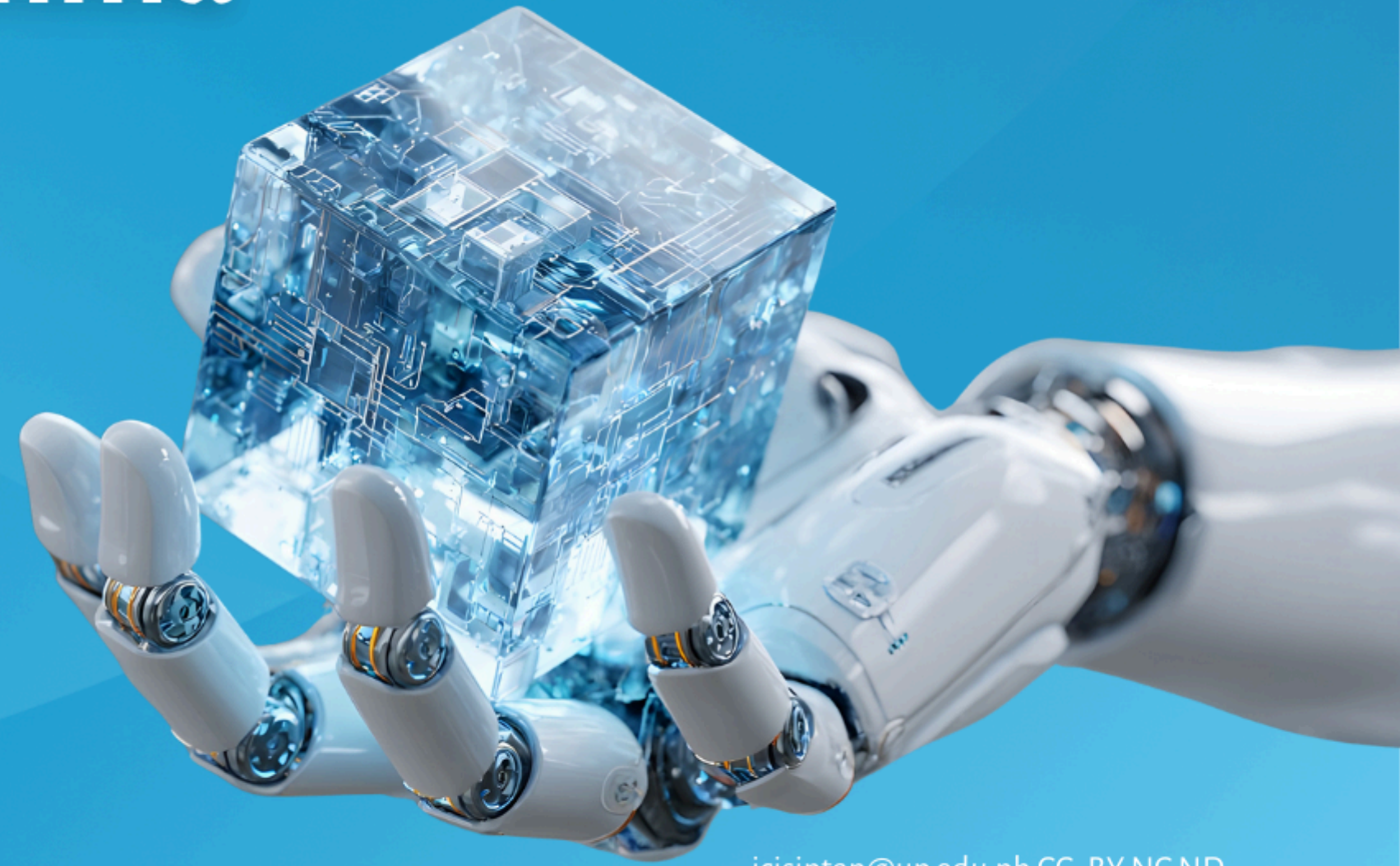
## The Medical Education Dilemma

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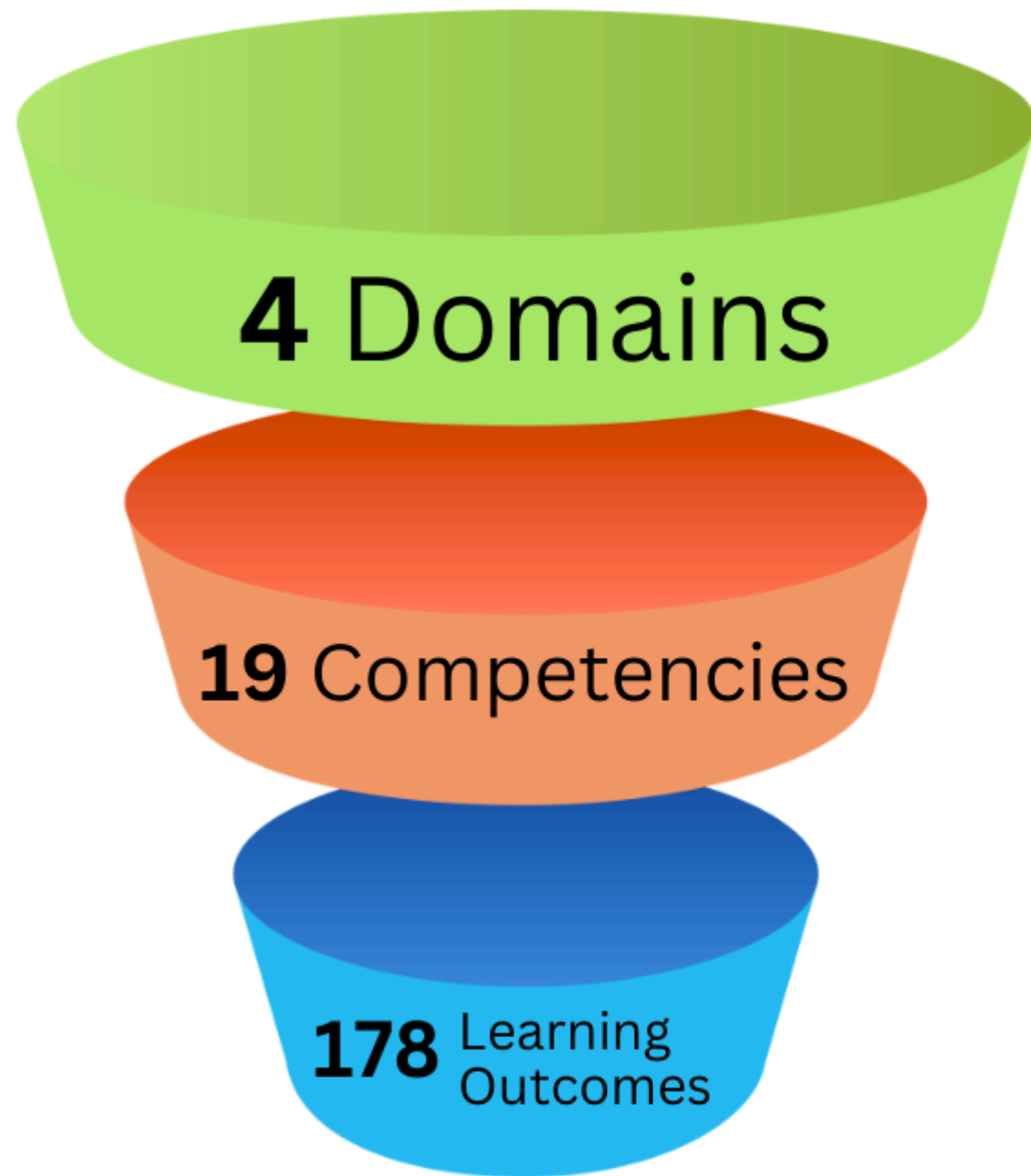
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## THE DILEMMA

**How do we prepare students for an AI future we haven't finished building?**



## DECODE Framework



- 1 Professionalism in Digital Health
- 2 Patient and Population Digital Health
- 3 Health Information Systems
- 4 Health Data Science

### Two mandatory AI LOs

- 4.2 Artificial Intelligence in health care
- 2.4 Clinical safety in diagnostics

***AI competency is embedded***

- 33 mandatory LOs
- 145 discretionary LOs

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WE HAVE STARTED

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# MI 220

## Introduction to Medical Informatics

since 2004

Elective for 2<sup>nd</sup> year medical students

AI included since 2019!

### **DECODE Mandatory AI Learning Outcomes**

4.2.1. Describe basic principles of artificial intelligence (AI), natural language processing (NLP), speech recognition, machine learning (ML), automated image interpretation, and predictive analytics.

2.4.3. Recognize the limitations of fully-automated AI-led diagnostic platforms and traditional platforms.

*The course has kept pace. It has limited reach. Can't cover all LOs.*

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# Additional 8 AI LOs for the Philippine Context

1. Explain importance of rigorous real-world clinical validation of AI before implementation.
2. Critique limitations of and barriers to using AI in healthcare.
3. Maintain vigilance and validate advice given by machines to avoid automation bias.
4. Demonstrate safe use and integration of evolving AI-based technologies.
5. Maintain vigilance on ethical concerns of AI simulating human behaviors.
6. Explain concept of explainability and neural networks and implications in healthcare.
7. Explain how AI and ML tools become biased by training data and impact health equity.
8. Describe potential applications of large language models in healthcare.

***Emphasis on critical appraisal over tool operation***

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BUT THERE IS NO SPACE

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33

+

8

DECODE  
mandatory LOs  
(includes 2 AI LOs)

Discretionary  
AI LOs included

It is likely that there is digital health content being taught.

***With DECODE, we have a standard to map against.***

# WHEN AN INSTITUTION TRIES

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DECODE Domain	LU III Human Dev., Structure & Function	LU IV Pathophysiology & Therapeutics	LU V Ambulatory Medicine (Clerkship I)	LU VI Hospital-Based Medicine (Clerkship)	LU VII Comprehensive Health Care
<b>Domain 1</b> Professionalism in Digital Health	<b>IDC 202 – Art of Medicine 3</b> <i>LOs 1.1.4, 1.2.1, 1.2.3</i> <b>HD 202 – Human Development 2</b> <i>LOs 1.1.1, 1.2.2</i> <b>IDC 211 – Research Methods 1</b> <i>LO 1.1.5</i>	<b>IDC 203 – Art of Medicine 4</b> <i>LOs 1.1.2, 1.1.3</i>	–	–	–
<b>Domain 2</b> Patient, Consumer & Population Digital Health	<b>HS 201 – Human Health &amp; Wellness</b> <i>LO 2.1.1</i>	<b>IDC 203 – Art of Medicine 4</b> <i>LO 2.2.1</i>	<b>FCH 250.1 – Clerkship in Family Medicine</b> <i>LOs 2.3.1, 2.3.2, 2.6.1</i> <b>FCH 250.2 – Clerkship in Community Med.</b> <i>LOs 2.3.4, 2.3.5</i> <b>Radio 250 – Clerkship in Radiology</b> <i>LOs 2.4.1, 2.4.2, 2.4.3</i>	–	<b>FCH 260.2 – Internship in Community Med.</b> <i>LO 2.3.3</i>
<b>Domain 3</b> Health Information Systems	<b>IDC 211 – Research Methods 1</b> <i>LO 3.1.1</i>	<b>HS 202 – Biopsychosocial Dimensions of Illness</b> <i>LOs 3.1.2, 3.2.1</i> <b>IDC 212 – Research Methods 2</b> <i>LOs 3.1.3, 3.2.2</i> <b>Ther 201 – Pharmacologic Basis of Ther.</b> <i>LO 3.3.6</i>	<b>IDC 221/222 – Management in Health Care</b> <i>LOs 3.3.1, 3.3.2</i> <b>Med 250 – Clerkship I in Medicine</b> <i>LOs 3.3.3, 3.3.4</i>	<b>EM 251 – Clerkship in Emergency Med.</b> <i>LO 3.3.5</i>	–
<b>Domain 4</b> Health Data Science	<b>HS 201 – Human Health &amp; Wellness</b> <i>LOs 4.1.1, 4.2.1</i> <b>OS 201 – Human Cell Biology</b> <i>LO 4.4.1</i> <b>IDC 211 – Research Methods 1</b> <i>4.2 Disc. LO 15</i>	<b>HS 202 – Biopsychosocial Dimensions of Illness</b> <i>4.2 Disc. LO 17</i> <b>IDC 212 – Research Methods 2</b> <i>4.2 Disc. LO 3</i>	<b>IDC 213 – Research Methods 3 (EBM)</b> <i>4.2 Disc. LO 18</i> <b>IDC 221/222 – Management in Health Care</b> <i>4.2 Disc. LO 4</i> <b>Med 250 – Clerkship I in Medicine</b> <i>4.2 Disc. LO 5</i>	<b>IDC 205 – Art of Medicine 6</b> <i>4.2 Disc. LO 14</i> <b>Med 251 – Clerkship II in Medicine</b> <i>4.2 Disc. LO 6</i>	–

# Our Reality

Transitioning to EHR

Fragmented systems working toward interoperability

AI tools trained on non-LMIC data



# The Mandate

Prepare students for AI-integrated practice.

**Be AI-ready.  
We cannot wait!**

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## WHAT AI DEMANDS



AI mimics clinical reasoning.  
***That changes everything.***

**NOT:** How do I use this tool?

**BUT:** Should I trust this tool's judgment over my own?

**AND:** Was this tool built for my patient?

THE PLAN

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**We have the map.  
We keep moving.  
AI will not wait for us.**

